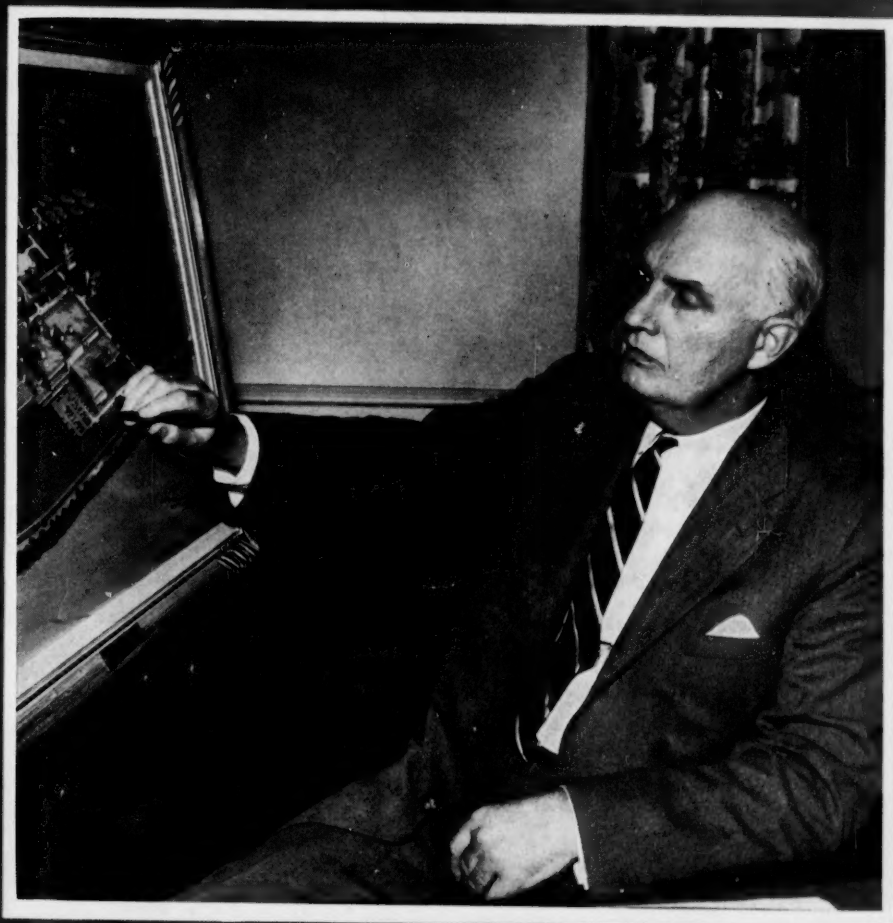


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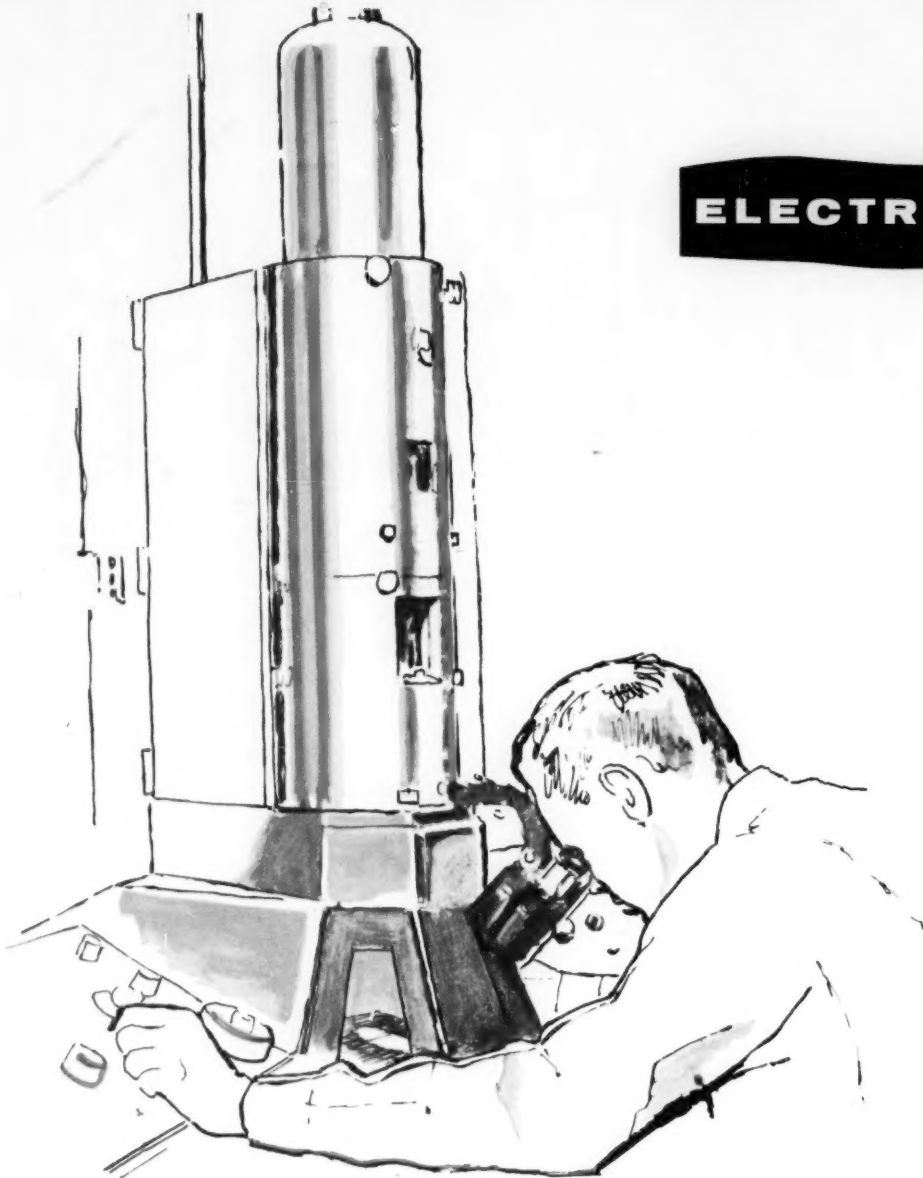
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THE NATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION



CAPITOL HILL PLANNING A. M. MOERLE

Keeping track of the nation's industrial growth for more and better food, clothing and consumer goods is the program on careful planning and research for a better future. (Page 54).



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INDUSTRIAL DEVELOPMENT and manufacturers record

Volume 127 October 1958 Number 11

BPA

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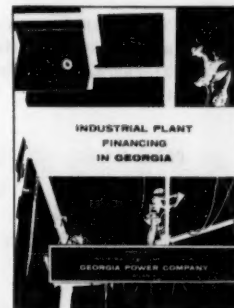
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SOUTHERN CALIFORNIA

IN OUR OPINION...

Spokesmen for one of the nation's largest manufacturing firms have for several years been making speeches around the country, proclaiming "We don't believe in handouts—we don't expect a community to give us anything to get our new plant." These statements, made with the best of intentions, have confused some industrial executives and a lot of community leaders.

The confusion comes from use of the word "hand-out." No self-respecting company wants to be labeled as the recipient of charity. And few communities want to admit that they have to resort to giveaways to attract a new firm.

Yet, every alert firm, no matter what its size may be, is looking for opportunities. And these opportunities include better plant locations which offer special inducements. No one feels embarrassment at choosing a community which is an unusually good place to live.

The blue-chip firm which will not accept a free site will be only too happy to locate in an area where there are good free roads, good free hospitals, and good free police protection. These "hand-outs" are socially acceptable.

Moreover, most site-seeking firms, including the biggest, are happy to have the local government "cooperate" in the extension of water and sewer lines, and other services. When you make an investment of several million dollars in a community, you don't lose face in accepting a \$75,000 utility extension to your property line.

The crux of the matter is that every alert firm is looking for special inducements of one sort or another and every alert community must be ready to offer as many attractions as possible.

What a community should offer depends entirely on its competitive position. A town in a remote region may have to give the shirt off its back to attract a market-oriented activity. A broker on Manhattan island won't offer anything more than is inherent in his site.

Many communities make the mistake of putting their funds into free build-ings or sites when they ought to be spending it for paint to brighten up the main street or asphalt to fix the holes in the roads. Others, with good community facilities, are equally wrong in failing to see the need for an industrial founda-tion fund to use in handling special situations.

How far should a community go? From the community's view-point, it makes sense to spend 50 cents to bring in a dollar. It's not sensible to invest two dollars to bring in a dollar. Each proposal must be evaluated in terms of what it may mean to the community.

For example, a community may have an excess of female labor. It wouldn't be logical to offer special inducements to firms using male workers primarily, but it might be worthwhile to invest in some activity which would give em-ployment to more women and thus balance the local economy.

From the company's viewpoint, it is equally important to analyze the situa-tion. Is the local community providing you with a building at the expense of the school system? Is the money for the sewer extension going to have to come out of the hospital fund? You need to know, because you're going to have to live with the local situation from now on.

It's not a simple question, to be shrugged off with an easy phrase. The only answer is more extensive study of all of the 700-odd plant

OPINION

location factors, and more intelligent techniques for arriving at decisions when the facts are known.

Belatedly, we congratulate the California State Chamber of Commerce for another piece of business statesmanship.

You'll recall that it was this group which a couple of years ago obtained passage of a business climate resolution in the California legislature. This act committed the state lawmakers to examine every future act to determine its possible effect on industrial development in the state.

Now, the Chamber has put over another resolution which is designed to develop technological industries by promoting scientific education and research. What this means to the state is summarized by T. I. Mosely, President of Dalmo Victor Company, as follows "The outstanding educational facilities of the State of California, most particularly the sciences, have enabled the state to attract as well as to generate a large proportion of the nation's burgeoning electronics industry."



Mosely

A new trend? Some of the best plant location brochures we've seen lately have been produced, not by chambers of commerce, but by private business firms interested in attracting customers or suppliers to areas in which they operate. A good example is the report prepared by Columbia Hydrocarbons to describe a site near Portsmouth, Ohio.

According to Vice President Alan A. Cullman "the brochure is not intended for general distribution but rather has been handed to chemical company representatives on personal visits or mailed to specific individuals."

Our August article on Roadblocks in the Sky has given us considerable satisfaction, because it seems several groups are already planning to do something about the situation. If you'd like to check up to see if your area is hemmed in by aerial roadblocks just order a sectional aeronautical chart for your area (send 25 cents, specify area, to U. S. Coast and Geodetic Survey, Washington).

We happened through Tucson recently during an interesting development confab. Jack Frye, former President of Trans World Airlines, was in town to make a deal—he'd locate an aircraft-manufacturing plant at the Tucson airport if local business leaders would subscribe \$500,000 in stock in the firm. After hearing the proposal, the Tucson Chamber voted "yes."

Down in Tennessee, it seems there's more opposition to modern distilleries than to moonshine installations. Anyway, Schenley Industries has run into opposition in seeking to re-establish a million dollar distillery near Tullahoma, where the "Cascade" distillery operated from 1870 to 1910.

What recession? The fiscal year for Conway Publications, Inc. (an enterprise somewhat smaller than General Motors) closed June 30 and now the auditors have given us the word about last year's operations. We're happy to report that our dollar volume was up 20 per cent over the previous year—the fifth straight year we've shown a growth of at least 20 per cent. All indications are that the volume for 1958-59 will show a similar gain.

Why? We think the answer is simple. Some years ago, we set out to serve the *growth* industries. We selected them as our readers and planned our editorial content accordingly. Today, our audience is composed of executives in the fastest-growing industries in the nation. We—and our advertisers—are riding the tide. Come on in—the water's fine.

H. M. C.



EDITORIAL SURVEYS . . .

and plant location reports

Since before the turn of the century MANUFACTURERS RECORD has issued special studies of specific cities and areas to assist the site-seeking industrial firm. Today, through the combined coverage of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD this tradition of leadership in this field is being extended and carried forward.

Before you go site-seeking, take advantage of background studies which have already been prepared for the areas listed below. Generally, reprints are available gratis.

Area	Publication	Date
Orange County, Calif. (ID-MR)		Sept., 1958
Erie County, Pa. (ID-MR)		Aug., 1958
New Bedford, Mass. (ID-MR)		Aug., 1958
Lower Va. Peninsula (ID-MR)		July, 1958
Mattoon, Ill. (ID-MR)		June, 1958
Florida Bay Area (ID-MR)		June, 1958
Western Mississippi (ID)		May, 1958
Savannah Ga., area (MR)		May, 1958
Knoxville, Tenn. (MR)		April, 1958
Charleston, S. C. (MR)		March, 1958
Dallas, Tex. (MR)		Feb., 1958
Louisiana (ID)		Jan., 1958
Cobb County, Ga. (MR)		Jan., 1958
Arizona (ID)		Dec., 1957
Pennsylvania (ID)		Sept., 1957
Canada (ID)		Aug., 1957
Petersburg, Va. (MR)		Aug., 1957
Southwest Ga. (MR)		July, 1957
Charlotte, N. C. (MR)		Feb., 1957
Meridian, Miss. (MR)		Jan., 1957
Little Rock, Ark. (MR)		Oct., 1956
Raleigh, N. C. (MR)		Aug., 1956
North Carolina (ID)		July-Aug., 1956
Memphis, Tenn. (MR)		May, 1956
Jackson, Miss. (MR)		March, 1956
Chattanooga, Tenn. (MR)		Feb., 1956

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LETTERS

SIRS: While reading the article entitled "Computing Coal Costs" in the July, 1958 issue of **INDUSTRIAL DEVELOPMENT**, I have noticed what appears to be a rather serious error which destroys the validity of much of the article.

In order to make the computation which Dr. Noble made, it is necessary to know the heat content of coal. Specifically, while heat content of coal is given in BTU per pound, and generally ranges from 10,000 to 15,000 BTU per pound, Dr. Noble has made his calculation in what appears to be the erroneous belief this was the heat content of a ton of coal. This is illustrated by numerous statements, such as "a ton of coal . . . will have a BTU value of about 13,200 . . ."

The outstandingly misleading results of this error appears most clearly in his Figure 2, where it is indicated that in Chicago, for instance, it costs about \$1 for about 2,000 BTU of heat content. Actually, of course, 2,000 BTU of heat could be supplied by about three ounces of coal . . .

A concurrent error is the application of the per ton freight rate to a per pound heat content. Of course, the proportion remains the same, and Figure 2 can be corrected by multiplying the figures on it by 2,000 . . . We would appreciate any comments your editors might have on this apparent discrepancy in this analysis.

Robert W. Thompson
Fantus Factory Locating Service
Chicago, Illinois

► We call attention to the following explanatory letter from Dr. Noble:

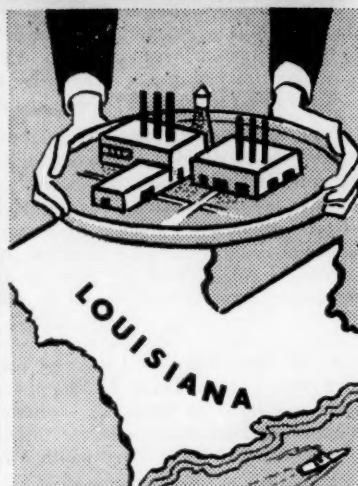
"Sirs: It was first with embarrassed surprise and then with deep chagrin that I noted the comments of Dr. Joseph A. Russell, University of Illinois, and others who pointed out that the BTU values used by me were for one pound of coal rather than for one ton as stated in my article. Careful review of these statistics by me, by a university dissertation review board of college professors, by the editors of this magazine, and by several government-employed economists failed to discover the error; perhaps a case of not seeing the proverbial trees because of the forest. This of course does not excuse error.

However, regrettable though it may be, the error can be corrected simply by multiplying all BTU values by 2,000 (including those of Figure 2). Since this does not change the relative relationships expressed in the article and on the maps, the analysis stands exactly as before, except with higher values. The relative cost relationships are not changed and Figures 1 and 2 can be contrasted exactly as in the article.

Allen G. Noble
Department of State
Washington, D. C.

SIRS: When we wrote to you . . . about our "Area Labor Market Trends" bulletin and the "Area Manpower Guidebook," we had not yet had an opportunity to see the

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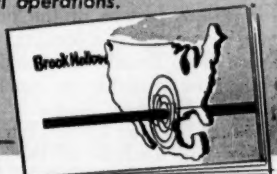


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LETTERS

May issue of your INDUSTRIAL DEVELOPMENT magazine.

A copy of this just came to our attention . . . and we are happy to note that your lead article "Labor's Shifting Currents" was devoted to a presentation of the gist of the "Summary and Highlights" section of the Guidebook. We were, of course, very pleased with your decision to feature our publication so prominently. The photograph at the head of the article was one of the most impressive views of "manpower en masse" we have ever seen.

Louis Levine, Asst. Director
U. S. Department of Labor
Bureau of Employment Security
Washington, D. C.

SIRS: As producers of Audio-Abstracts, we should like to be granted permission to abstract, condense or digest articles appearing in the regularly published issues of your magazine . . .

R. N. Linsenmeyer, President
Helbert Audio-Abstracting Company
Clarendon Hills, Illinois

► Permission granted.

SIRS: The undersigned has read with interest your article as it appeared in the December, 1957, issue of your very excellent publication. An insert in that article gave instances of where major annexations have been reported in the last several years.

It would be deeply appreciated if you could supply me with examples of where industrial plants, districts, or industrial park communities have resisted, successfully or not, annexation attempts of first class cities contiguous or adjacent to the plant, district or park involved.

Likewise we would be grateful for any special information or references you could give us as to articles or material discussing the growth and development of third or fourth class cities or industrial parks and districts as indicative of industries preference for such areas to avoid the continuing increase of special types of costly municipal taxes as promulgated and imposed by larger cities under whose political thinking and climate mass volume manufacturers and processors exercise little or no control . . .

Paul A. Olson, Vice President
U. S. Oil & Refining Co.
3001 Marshall Avenue
Tacoma, Washington

► Referred to ID's follow-up article on annexation in Feb., 1958 issue and ID editorial advisory board members.

SIRS: I noticed in your recent column, "In Our Opinion," you mentioned that "roving reporters are discovering that not all executives in the Great Lakes area believe the seaway will bring a big boom in business."

I have enclosed a copy of a speech given by Dr. Paul Craig of Ohio State University which we feel to be a good and reasonable appraisal of the effects of the seaway upon this region. I feel sure you will find Dr. Craig's analysis most interesting.

Walter L. Myers, Jr.
Executive Manager
Upper Ohio Valley Development
Council, Inc.
Staubenville, Ohio

October, 1958

ALBERTA... PROVINCE OF OPPORTUNITY!

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WEATHER... *its effect*

Weather and its well-known caprices have a profound effect on the desirability of any given area as a place in which to live and work. Here are the first two of a series of stories, written by experts in the field, giving details on weather factors of special interest to the site seeker. . .

CLIMATE is one of the most important factors in industrial development. In many areas it is a distinct asset for a community and the location of a plant. In some localities it has been treated—and rightly so—as a natural resource. This is particularly true where the climate favors outdoor activities and recreation.

However, no industrial establishment should be planned without taking climate into consideration. Its favorable and its unfavorable aspects alike should be fully considered and given equal weight with other factors such as availability of labor, access to markets or

raw materials, and taxes.

Climate governs many important facets of modern industrial location policy. In some instances this influence is an indirect but still potent one. Think in this connection just of the availability of water. This is primarily geared to rainfall which replenishes the natural water supplies.

Climate influences both capital investment and operation costs. It determines the size of heating facilities and of air-conditioning plants. It affects the efficiency of outdoor operations. It is a facet in the production, storage, and shipping of many products. Intelligent

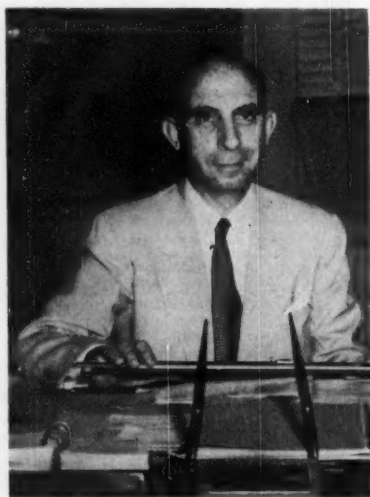
assessment of the climatic factor in industrial operations can save money and, in particular, managerial headaches.

The latter are usually connected with climatic hazards. These are not the same as the continuing effects of temperature, humidity, rainfall and wind which affect normal operations. The climatic risks of an area are usually governed by extreme events. These can cause major damage to capital investment, such as plant installations, and also disrupt operations.

In this category are high winds as produced by hurricanes or tornadoes, other severe storms which affect power lines and communications, snow and ice storms which interfere with transportation, and also extremely low or extremely high temperatures which have disruptive effects. Excessive rainfall leading to floods will, of course, interfere with poorly sited plants.

Climatic statistics permit the assessment of frequency and extent of such risks just as they can provide estimates for design factors of the normal climatic elements at a locality. Data collected from literally thousands of locations, now available on punched cards at the Weather Bureau's National Weather Records Center, permit quick access and analysis of these climatic factors.

Climatological research has also tackled another aspect of modern industrialization which has become of vital importance to many communities. This is the control of plant effluents and pol-



Dr. Helmut E. Landsberg is director of the Office of Climatology of the United States Weather Bureau. He also serves as Weather Bureau representative on U. S. representative on national and international committees and is chairman of the Earth Science Advisory panel of the National Science Foundation. He is editor of "Advances in Geophysics." Dr. Landsberg was born in Frankfurt, Germany, in 1906. He attended school there and took his Ph.D. at the University of Frankfurt. With wide experience gained in various positions in universities, observatories, laboratories and in military work, Dr. Landsberg in his scientific work has been mainly concerned with problems of climatology, micro-climatology, cloud physics and siesmology. He has published two books and 140 research papers, and has acted in a consultant capacity to a number of industrial concerns.

t on plant location

By Dr. H. E. Landsberg

lution. The general and local climate of an area dictate the vulnerability of a site to air pollution. The wind currents and stratification of the air will determine whether pollutants brought into the air are dissipated rapidly or will hang around to plague the neighborhood.

One need not wait until a pollution situation fully develops to have an estimate of the risk at a particular location. This can be determined by reference to the topographic and climatic environment which control the air pollution potential.

The Weather Bureau with its vast climatic archives and through its regular climatological publications furnishes the basic background information for

climatological analysis. Through its field organization of Area and State Climatologists, it makes this information available to public bodies and for general industrial and commercial use. It does not furnish, of course, individual service to industrial firms but supplies climatic statistics at cost of compilation.

The interpretation of such raw material is left to private meteorological consulting firms or to meteorologists who are in the employ of various corporations. In furnishing the generalized information the Weather Bureau cooperates with many local Chambers of Commerce who often bear the cost of printing authoritative climatological summaries for their communities.

rest, and once again supply references for further reading. If we agree on the truism that water is the life-blood of industry, then obviously the main concern of this article should be with precipitation conditions (rain, snow, etc.) over the Northeast as they affect water supplies and other factory problems.

The effects of temperature and humidity should come next in importance; then winds and atmospheric relations to air pollution; next such weather hazards as hurricanes or floods; and finally, something on the region's climate as a factor in working efficiency and employee living-comfort.

Principal Climatic Features

I. The region lies in latitudes where the duration of sunlight ranges from some 15-16 hours in late June to about 9 hours in late December. The long Summer days are warm, sometimes tropically hot; the long Winter nights tend toward Arctic-like cold. In comparison to some other areas in the same latitudinal belt, however, these seasonal extremes are comparatively moderate.

II. Cloudiness reduces the length of the sunlight hours throughout the year as a whole. Speaking broadly, the Northeast receives only 30-50 per cent of possible sunshine in Winter, about 40-60 per cent in Spring and Fall, and about 50-70 per cent in Summer.

III. These day-to-day fluctuations, along with changes in temperature, humidity, wind, and the occurrences of

NO. 1 | WEATHER PATTERNS IN THE NORTHEAST

By Dr. James K. McGuire

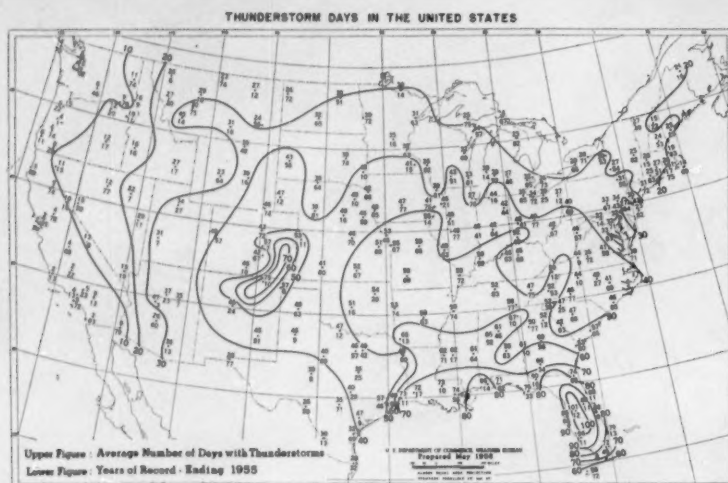
How can climatological information be profitably applied to the problem of selecting a plant site in the Northeastern United States?

Both the writer and the reader of this article can get down to the business of answering this question if we can agree on two simplifying assumptions.

(A). No article can give all the an-

swers, and no business man would want to read all the explanations and qualifications required for a comprehensive scientific discussion. On the other hand, it may be agreed that the reader is entitled to a summary of the technical aspects of the subject and to references for further investigation of them, if he be so inclined.

(B). The article ought to give the most important answers, outline the



precipitation are linked with the atmospheric circulation patterns. The Northeast is dominated by west-to-east air movements (the so-called "prevailing westerlies"), interrupted by northward and southward surges of the atmosphere.

The large-scale streams or masses of air involved in these movements differ (often markedly) in the surface weather conditions they bring. Their fairly steady procession, occasional stagnation and constant interaction are accompanied by similar behavior of the atmospheric high- and low-pressure systems (the latter with their associated weather fronts). Thus the Northeast is subject to the state of affairs honored in the traditional New England jest, "If you don't like our present weather, just wait a minute!"

IV. The Atlantic Ocean and the Ap-

palachian Mountains exercise a much smaller influence on the region's climate than might be supposed. The Appalachians are not high enough, for example, to establish separate climatic zones on their western and eastern sides. They do have, especially in their more elevated portions, a "mountain climate," that is distinguished from the climate of the rest of the region mainly by more severe Winters (with respect to both cold and snowfall) and by cooler Summer nights but more abundant Summer rainfall.

Since the prevailing atmospheric flow is from a westerly direction, the Atlantic represents a modifying rather than a controlling climatic factor. Its influence is most felt along a narrow coastal strip that enjoys cooler Summer afternoon temperatures than inland locations, due to the onshore "sea

breeze"; but the coastal belt is subject to more fog and generally damp conditions than the interior.

The presence of the Atlantic Ocean is very important, however, as a source of moisture for rainfall. Perhaps most noticeable is its function in fostering the development of coastal storms or "northeasters", that typically form off Cape Hatteras and move up the coast toward Newfoundland. These can be very severe along the shore and their effects may occasionally extend over the entire Northeast.

The Ocean also serves as a passage-way for West Indian hurricanes, about which more will be said in due course. Surprisingly enough, the Great Lakes (Erie and Ontario) do affect significantly their eastern and southern shores; for example, the lake fronts have cooler and later Springs as well as windier and snowier Winters than they would if the lakes were not there. River valleys, too, have local climates that may differ appreciably from those of the adjacent higher land.

Precipitation

During the colder half-year (October-March) the Northeast receives its rain and snow from the general low-pressure systems that sweep across the continent or swing up the coast. During the warmer half-year (April-September), this large-scale activity decreases but its rain-producing effect is replaced by local showers and thunderstorms. Thus the Northeast usually has an adequate and dependable source of water the year around. Moreover, precipitation is usually distributed evenly over the year, with no pronounced wet or dry seasons.

The annual amount of precipitation averages about 40 inches at most places in the Northeast: over a ten-acre site, this represents nearly eleven million gallons of water per year! The mountains, especially in West Virginia, New York and New Hampshire, have average annual amounts of 50 inches or more.

An interior belt (extending from western Pennsylvania through western and extreme northern New York into the northern portions of Vermont, New Hampshire and Maine) averages 30-40 inches. The coastal zone east of the mountains averages 40-50 inches. Of course, this general outline does not exclude local variations, which may be sizeable.

An authority on water resources has

stated that "factories have been built without prior studies to determine whether water would be available to operate the factory and to provide for the communities around them." Such studies might seem unnecessary in the Northeast in view of what has just been said about its plentiful and dependable rainfall. This is not the case. Water is needed by more and more people for more and more reasons, and the business-man thinking to build a new plant should carefully evaluate against future as well as present requirements not only the available water-distributing facilities but also the relevant precipitation records.

The U. S. Weather Bureau maintains and publishes these records for over 2,000 locations in the Northeastern States.

The foregoing applies to precipitation on a monthly, seasonal or annual basis, for planning industrial operations dependent upon the water supply. The intensity of short-period rainfall, that which falls in a matter of a few hours, is also important. Reasonable design-values for storm sewers, for instance, may be obtained from Weather Bureau records and statistical studies.

Snow presents at least two important problems to industry. First of all, it must be cleared away from highways and factory roads, parking lots, loading

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and unloading sites, etc. A knowledge of the expected snowfall in a locality may be used to determine the most economical and efficient types and quantities of snow removal equipment. Secondly, the sheer weight of snow on a roof, especially a flat roof, may be very heavy. Unless the structure has been properly designed for a reasonable snow load, damage and possible collapse can result.

Closely related to rain and snow is that "in-between" form of precipitation known as glaze or freezing rain, often miscalled sleet. In a few minutes, this can convert a surface into a slick and slippery sheet of ice. Vehicles will skid, pedestrians will fall; accidents will happen. To reduce this hazard, attention should be paid to the glaze potentiality

of a factory site, and its approaches. A professional climatologist can size up a factory site from this point of view and offer helpful recommendations.

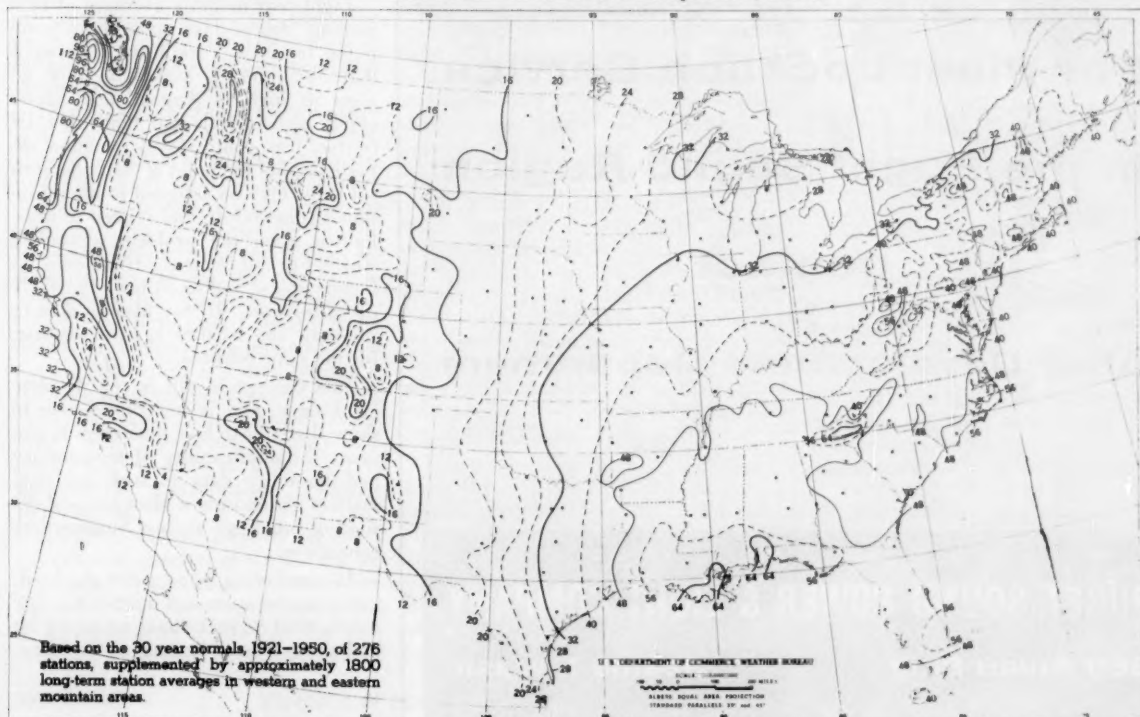
Finally, if lightning represents a danger in the type of industrial operation being planned, the statistics should be consulted on the frequency of thunderstorms in the area.

Temperature and Humidity

Heating degree-days give a useful index to winter cold and consequently to what may be expected in the way of fuel consumption for heating purposes. Whenever a day's average temperature drops below 65° F., its value is subtracted from this base and the difference is termed so many heating degree-days. A cold day or winter will therefore have more degree-days than relatively mild ones; and a place that has less rigorous winter temperatures than another will have fewer degree-days.

In the Northeastern States, the normal accumulation of degree-days for the heating season (usually taken as the period from September through May) shows a considerable variation. In the Delaware-Eastern Maryland region, it is about 4,000. From this minimum point, the normal accumulation increases northward to about 6,000 in central Pennsylvania and Southern New

Normal Annual Amount of Precipitation (Inches)





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England, to over 9,000 in northern Maine.

In West Virginia, the accumulation normally exceeds 5,000 in the mountains but is under this figure in the western part of the State.

The most popular measure of atmospheric moisture, the relative humidity, is actually among the poorest indicators from the scientific viewpoint. A good technical measure, the "effective temperature" suffers from the drawback of being sufficiently complicated to make it hard for the layman to understand and for the climatologist to apply to large amounts of weather data. A promising substitute for the effective temperatures is the "discomfort index," which is the average of a pair of simultaneous dry- and wet-bulb temperature readings.

It has been found that most people will become uncomfortable when the D.I. or discomfort index approaches 70 and will experience increasing discomfort as the D.I. exceeds this mark. If 65° is used as a base, and the difference between it and a higher D.I. value is taken, the difference may be called "cooling degree-days" and accumulated in a manner analogous to heating degree-days. In this case, however, the purpose is to measure Summer discomfort, and the greater the cooling degree-day total the more uncomfortable is the temperature-moisture condition.

Eight-year monthly averages of such cooling degree-days have been computed for New York City. They show that discomfort is highest in July, almost as high in August, and appreciably high in June and September. Of course, this conforms to common experience, but the point is that a numerical value may be assigned to the sensation of discomfort, and related to price figures when the problem is studied whether or not to air-condition office or factory space, and to estimate the likely operating costs. It may also be used to compare one locality against another, for the same purpose.

This concept is still in the development stage, and is introduced here to show that research is underway to improve the applicability of temperature and humidity data to such practical matters as choosing a plant site and designing buildings against summertime conditions.

As concluding items under the heading of temperature and humidity, a few words must be said about ice and frost and about freezes. Regarding the latter,

date of the last occurrence in Spring and the first occurrence in Fall of important threshold temperatures such as 40°, 32° and 20°. The average and extreme depth to which frost penetrates the ground is also known for many places. The relevance of this to construction matters needs no elaboration.

Wind and Stability

In order to effect economy in operations and to improve community relations, more and more businessmen are endeavoring to minimize any air pollution problem connected with a factory. The best way to do this is obviously to anticipate the problem and design chimneys, waste outlets, etc. to reduce the contamination to an unobnoxious level.

For example, a major public utility is constructing a reactor to generate 275,000 kilowatts of electricity at a site in the Hudson Valley. As part of the preliminary construction work, a 300-foot tower has been erected and instrumented to measure the wind flow and vertical temperature structure of the lower atmosphere. The information thus obtained, plus data from wind tunnel studies, will be used in the final determination of stack height and design.

The average industrial plant does not have as crucial an air pollution problem as a nuclear reactor. In all cases, however, the waste gases and smoke are harmlessly dispelled or concentrated in the atmosphere depending upon the speed of the wind (also its direction in certain instances) and upon the atmospheric stability or instability.

There is sufficient information available (some of it is cited in the References) to permit an intelligent evaluation of the likely wind and stability conditions at a proposed plant site to be made in advance of any decision to build and before, not after, costly construction features pertinent to the problem have been adopted. In general terms, the Northeastern United States are not as air pollution-prone as other parts of the world and even other sections of the country. Especially along the coasts, of the Atlantic and the Great Lakes, wind movement is usually sufficiently high to make the risk of severe atmospheric contamination comparatively minor.

Sheltered valleys, however, are very subject to stagnation of the air, the development of exceptionally stable conditions, and the consequent entrapment of pollutants. In the fall of the year especially, the large-scale atmospheric

patterns are frequently such that irritating "smog" situations are established in and around every large population center or factory town.

These large-scale weather factors cannot be entirely allowed for, and it may not always prove practicable to select a site that has the minimum "pollution potential." The wise use of climatological data and knowledge will nevertheless pay dividends in the form of improved employee comfort and optimum community relations.

The three most serious weather hazards encountered in the Northeast are floods, hurricanes and tornadoes. More common but much less dangerous are blizzards and hailstorms, and they may be discussed first.

True blizzards, that is, the combination of near-zero temperatures, gale force winds, and falling or blowing snow that blinds the vision and piles up in huge drifts, are rare in this portion of the country. They are most apt to occur along Lakes Erie and Ontario.

Hailstorms are unusually severe thunderstorms. Because of their localized and spotty nature, it is difficult to compile accurate statistics on their occurrence.

Like hailstorms, tornadoes are associated with severe thunderstorms, but there the resemblance ends. Large-sized hailstones will break windows, skylights, puncture car tops, damage certain types of material left exposed on open platforms or in the yard. A tornado will destroy, injure and kill. It brings not only a ring of rapidly-whirling winds, 200 m.p.h. or more, but a sharp reduction in the atmospheric pressure inside its funnel that can cause buildings literally to explode.

On June 9, 1953, for example, a tornado devastated central Massachusetts and struck several modern apartment buildings and factories in the city of Worcester, along with hundreds of frame dwellings in the suburban and rural areas along its course. Most of the latter were reduced to kindling wood where the tornado struck full force; the steel and concrete structures sustained comparatively small damage.

It was concluded by a team of engineers that factory structures designed in accordance with accepted modern standards are relatively tornado proof, although the different types of construction had varying resistances and severe damage must be expected to glass, roofs and lightweight sidings when even a modern building receives the full im-

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part of a tornado.

The probability is small, however, that any given area, such as a plant site, will be struck by a tornado. But it should not be overlooked, that no spot carries with it a guarantee against tornadoes, and they should be reckoned with in planning factory structures. There is abundant climatological information on which to base such plans.

Hurricanes, while their violent winds do considerable damage, are most dangerous to shore installations. They produce a "storm surge" that may raise the water level suddenly to several feet above mean water; the resultant flooding, unless the building has been protected against it, will damage machinery, supplies, etc. in cellars and ground floors. No factory should be built on the shore, whether of the open sea, bay or tidal estuary, and no docking facilities should be erected, without considering the possibility of this kind of hurricane damage.

In cases where plant sites are located along rivers and streams—as they often are for water access—the heavy rains associated with hurricanes will cause quick rises and similar flooding. In the New England hurricanes of 1955, for example, severe water damage was suffered in the "mill towns" built along the usually peaceful river banks.

The lesson is that stream flow, rainfall and hurricanes records should be consulted when contemplating a plant or factory near the water. The centers of a good many hurricanes and less intense tropical storms have passed over the Northeast area. In the period 1901-55, 23 have passed over Maryland and Delaware, 13 over New Jersey, 12 over Pennsylvania, 9 over New York, 21 over the southern New England States, 6 over New Hampshire and 7 over Maine, no hurricane "eye" went directly over West Virginia and Vermont during these fifty-five years. In analyzing these figures, it should be remembered that the same storm may have passed over several States; in other words, that the total of these individual figures is not necessarily the true over-all total for the area.

Balancing this, parts of the area (especially the coastal belt) have been affected by additional hurricanes whose centers did not happen to pass over one or more of the States listed. There is no persistent pattern or sequence by which various sections of the Northeast have been affected; hurricanes are facts in the area's climatological history and

should be respected as such in any building plans.

With regard to floods, enough has been said for the purpose of this article in connection with those due to hurricanes. They have also resulted from other types of storms, either major low-pressure areas or small-scale storms (or "cloudbursts"). All these kinds of storms have produced floods, their effects depending upon the intensity of the rainfall and the size of the area affected. They are most frequent during Summer and Autumn.

Another kind of flood, typical of Spring but occasionally experienced in Winter, is that due to the thawing of snow, when the melted water runs off the frozen ground and eventually pours into the streams.

Methods have been devised to estimate the frequency of floods of specified heights on most of the important rivers in the country; it is therefore possible to take precautions (levees, spillways, etc.) where conditions warrant, without exaggerating the danger.

As a final item, the writer wishes to deliver restrained praise of the climatic advantages of the Northeast from the viewpoint of human enjoyment. In Summer, the coolness of the mountains and the seashore adds to the pleasures of vacation. In Winter, the bracing air and snowy slopes beckon to ski enthusiasts. In Autumn, week-end trips to view the flaming foliage are enhanced by the beauty of the sky and the clarity of the atmosphere. And in Spring, the invigorating sight of budding vegetation is made more attractive by the equable temperatures.

In more sober terms, the Northeastern States offers a climate that is good for business and, equally important, is good to work in and enjoy.

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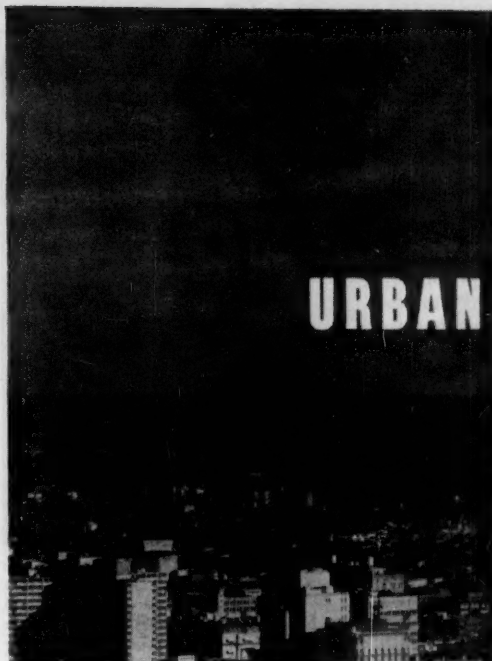
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URBAN GROWTH

Many of the nation's major cities today are attacking vigorously and effectively the problem of urban decay. The development of leadership to carry out such programs for renewed urban growth is discussed here by a top insurance executive. . . .

By H. Bruce Palmer

There is nothing more dynamic than a modern city, in which we have our common investment in all of its services to the individual. There is no more satisfying contribution that man can make in life than to enjoy the feeling that he is a part of its brick and mortar.

Industry, in its full dynamic character, is made up of inventions protected by patent laws which give private ownership to ideas; private property, protected by the laws of our states and our nation; mass production which depends upon an adequate market and a high standard of living; industrial management which gives special attention to the costs of producing goods and services in a competitive enterprise system; risk capital with adequate return to the owners of that capital; research and development laboratories; constantly increasing productivity; marketing through an efficient distribution system; transportation; competition; and efficient distribution of profits between owners

or stockholders, labor and consumer so that all may buy the products of mass production and provide for an expanding economy through rising standards of living.

A complicated picture to say the least. Its relationship to the modern city until recently became a discouraging thing and tempted many in industrial management to look elsewhere for a new environment in which a more promising relationship could be created. The movement of industry away from the central city brought with it a growing realization that the billions invested in community services and in fixed plants was an unwarranted waste of human and physical resources.

This country should be forever grateful to the City of Pittsburgh for its stimulating leadership in attacking aggressively the problem of urban decay. The phenomenon of its action program became a symbol of urban revitalization, made even more stimulating because of its tremendous topo-

graphical problems. From this beginning we have seen one of the most encouraging developments in American life today—scores of cities undertaking similar programs.

Perhaps, we have stopped committing suburbicide!

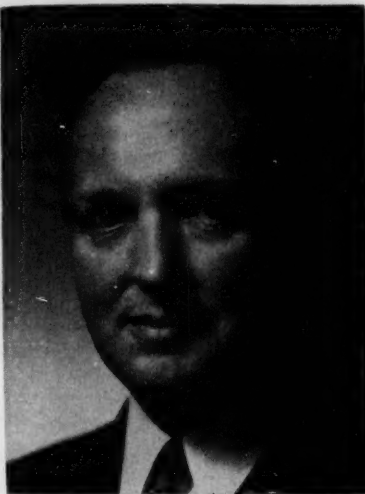
Here, too, we find the unveiling of the new concepts of corporate citizenship. Still undefined by the dictionary, it encompassed those many things which a corporation can do, in conjunction with its primary purpose of providing goods or services which will improve the economic, the social and the political atmosphere within which the corporation and its people live, work and progress. Sound economic and social growth of the community is industry's most secure bank account.

With the complexities of metropolitan life today there can be no withdrawal of corporate responsibility. Business thinking dominates community thought and action; its deportment assures its progress. For any society, or a community, to be great, its leadership must think great. The renaissance of our cities today comes from the vision of one or more business leaders.

The problems with which the urban developer copes today are vast. They run the full gamut of every social and health problem known to man. Our central cities are crowded with the indigent left by the suburban dweller to solve problems to which he has indifference or a complete lack of knowledgeable approach. Such unsolved problems have their impact on the industrial community—its labor force, its property and the general morality of its environment.

An investment of time, leadership and money may be far less costly to community industry than plant and service replacement costs in a new location. In addition to the problems of urban decay and suburban sprawl, this developer faces downtown congestion and the need for efficient transportation which moves people swiftly and conveniently; he plans for the elimination of obsolescent fixed plant in order to create new and greater ratables, and increasing employment opportunities; he must create the mechanism to assemble and finance property acquisition in packages attractive to new businesses and industries.

He sees the vision of eliminated overlapping and duplication of gov-



H. Bruce Palmer is president of the Mutual Benefit Life Insurance Company, Newark, New Jersey. The material for his report here was taken from a talk he made before the 46th annual meeting in Washington of the Chamber of Commerce of the United States.

ernmental units and its replacement with metropolitan patriotism where there now exists isolated small community loyalties; he realizes, perhaps for the first time, that there is an interdependence of his home and his business communities; that the economic and certainly the social health of one has a direct bearing on the solidity of the other.

Tremendous Job

To tackle this tremendous job, leadership is needed to create some form of metropolitan agency. Our higher educational system will some day furnish the qualified professional manpower that is needed, but today such men are in very short supply. Volunteer workers are doing a surprisingly effective job. The volunteer aspect of the approach may in itself be a strong supporting reason for the results which are being attained.

Let me list the functions of any agency created for community redevelopment.

1. To receive, collect and analyze present information with respect to all phases of metropolitan development.
2. To analyze and appraise the present assets of the subject community—to sit on the fence, so to speak, and watch ourselves go by.
3. To carefully implement all important development decisions

dealing with such matters as transportation, land use and community facilities.

4. To establish development goals through organized planning and economic base studies and be certain of their interrelationships.
5. To create a workable fiscal policy and plan for all development effort.
6. To provide the means of communications and collaboration between all segments of the community.

No community analysis, no community planning comes from the uncoordinated activities of its citizens. A vehicle, or a mechanism, is needed. Our cities are not unlike the goods and services we create and sell. Cities are increasingly competitive items placed on the shelf for the discriminating purchaser.

As in our business system, competition is good for it breeds community cooperation. There is no basic conflict between organized labor and management, between business and the public, between business and government. A conflict exists only in ignorance and in misunderstanding.

Any redevelopment program, to be successful, must have as its objective the creation of a new environment, where business can grow and prosper—not for the sake of business alone, but for enlarged job opportunities, prosperity and security for all the people. To be effective this mechanism must bring into being a new partnership of labor, business and the community. The job of this partnership is broad in its scope.

One of the greatest challenges of modern living is for original, creative thinking on the newest frontier of America—the replanning, the rebuilding and the renewing of the central city. Industry creates wealth and has the responsibility to maintain wealth once established. Money, of course, is not everything, but it is far ahead of anything in second place.

In community planning, perhaps, we have been feeding the cart instead of the horse. The community horse is business and industrial renewal. Economic wealth permits the community to afford the cart—modern housing and economic stability for the city population.

If you accept with me the thesis that a community is a product, then

you will accept the need that like a product it requires constant research, constant redesigning and constant repair to be salable. Once this product is understood, enthusiastically accepted, then it must be sold—merchandised in the market place. It needs the professional touch of the sales promotion expert; the advertising executive; it needs word of mouth support, for everyone in the community then becomes its salesman.

If you need a reason for support you will find it in more ratables bringing lower taxes, better government at a lower per capita cost. Every mechanism, every agency for redevelopment needs this built-in merchandising process.

Since we are dealing with economic, social and political problems, the broad subject of redevelopment cannot be attacked from the point of view of any special interest group. The organization designed to meet this problem from its first conception must be created in such a way that the voice of all segments of the economic, social and political community will be heard. Of course, the organization must develop business leadership which understands the economics of the area and appreciates those things which assures the area's economic growth.

Here perhaps lies the unquestioned role of a Chamber of Commerce. The posture of business leadership must be clearly defined in the public's mind as one acting only in the public interest. This should not be difficult if there is a fundamental understanding of the substance of economic growth—a high level of income and employment for a growing population.

Everything must be judged against this yardstick, for the only chance of success in dealing with metropolitan problems lies in the opportunity for the largest corporate citizen and the smallest private citizen to accept mutual interest in the area's economic growth. To arrive at a point where those who will be helped and those who may be hurt can sit around the table and attempt objectively to solve a community problem is not the easiest objective in this changing world.

If such a relationship is not developed from the beginning, any program primarily designed to achieve metropolitan growth is doomed to failure. There must be a trinity of interest on the part of all three citi-

zen segments.

Many make the mistake in talking of metropolitan problems to conclude that the agency established to deal with these problems need be metropolitan government.

Although most established agencies have as a basic objective the clearing of communications, the real problem is to relate a vague and foggy notion of common metropolitan interest into a specific action program on a permanent and continuing basis.


Where there are metropolitan problems, there are also traditions, customs, antagonisms and hostilities well established. Some one has to lead and some one must create the vision. This leadership has not been forthcoming from the political sector but neither has it been coming to any great degree from the business community. Proof is still needed in most cases that business leadership is capable of dealing with the total metropolitan problem.

As life itself is constantly renewed, so, too, must the techniques be developed to perpetually renew the physical environment of our communities. The never-ending need to retain dynamic forward movement to levels of greater strength and growth, through expansion and constant renewal, is directly dependent upon the sustained efforts and vision of business, labor and government toward the common goal of community strength and progress.

Development Group Endorsed in W. Va.

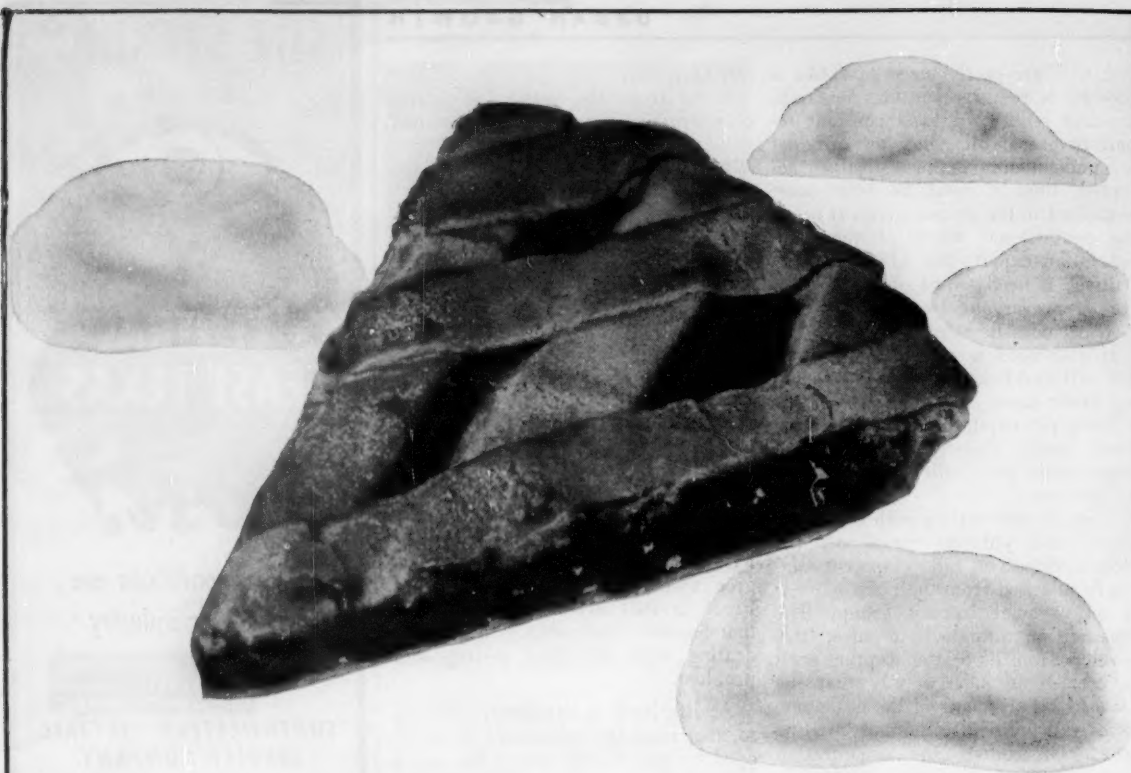
WHITE SULPHUR SPRINGS. The West Virginia Bankers Association at their annual meeting here went on record as favoring in principle the adoption of legislation which will permit the formation and successful functioning of industrial development corporations in West Virginia.

After hearing recommendations from the Industrial and Commercial Development Committee of the association, the bankers authorized and directed the committee to continue its study of such plans and, at the earliest time feasible, to report its recommended plan and proposed legislative bill to the Executive Council.

SITE SEEKING?
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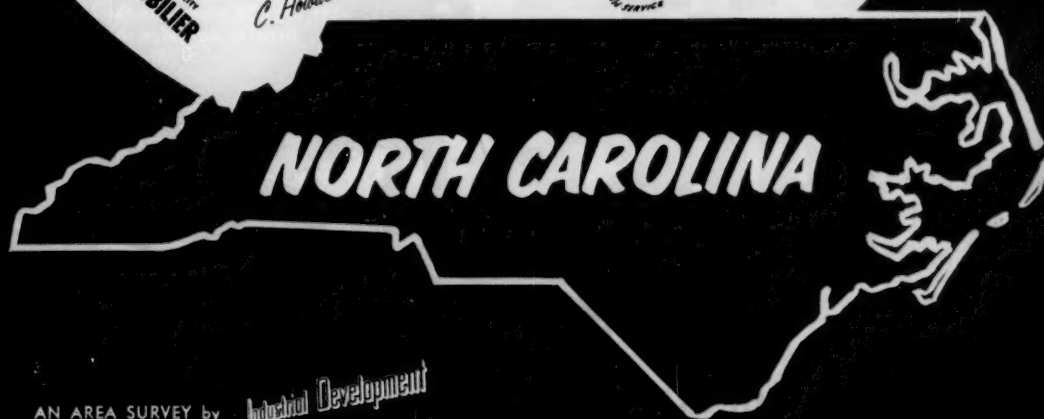
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361

**NEW AND
EXPANDING
INDUSTRIES
INVESTING
\$243,809,000**

in new plant facilities
in North Carolina during the fiscal
year 1957-58 made this the largest
fiscal or calendar year in the
State's history.

EXPANDING INDUSTRY IS ON THE MOVE TO
NORTH CAROLINA

For prompt and confidential plant location information you are invited to contact
William P. Saunders, Director, Department of Conservation and Development, Raleigh, North Carolina.

Situated in a woodland setting is this baby food plant of Gerber Products Company being built near Asheville, North Carolina. To have more than 400,000 square feet of floor space, the plant represents an investment of more than \$4 million. Six Associates, Inc., of Asheville, are the architects-engineers.



The Tar Heel state already has chalked up an enviable record of industrial growth, and it intends—enthusiastically—to maintain that fast pace of development. Discussed here are the outstanding business climate and many other factors which make the state an unusually alluring area for the site-seeker.

By Jouett Davenport, Jr.

RALEIGH, N. C. The scene is the comfortable but unpretentious office of Governor Luther H. Hodges in the State Capitol of North Carolina. You, the visitor, have been pleasantly surprised by having had the state's chief executive greet you at the door of his office and usher you cordially inside.

Your first and instant impression is that here is a man of tremendous personal magnetism. Quickly thereafter you learn as you listen to his earnest conversation that this charm has behind it great intelligence and integrity, and you know that the extensive evidence you have seen of North Carolina's rapid growth is in many ways a reflection of this man's efforts.

Under Governor Hodges' leadership—and it is the leadership of one who is essentially a business man, rather than a professional politician—the State

Government has helped to create, from the mountain areas to the plains and to the sea, an unusually favorable business climate in North Carolina. Part and parcel of this climate is the friendly, forward-looking attitude of the people in the cities, towns and hamlets in all parts of the state.

"Our administration," the Governor observes, "has gone all-out to supply the leadership and energy to accelerate North Carolina's economic growth and

to make it progressively more attractive to industry. With this assurance to back them up, the people in individual communities have been inspired to take part in the program and to offer every possible cooperation at the community level."

This broad effort has been made doubly effective because North Carolina is fortunate in possessing, in its location and highly diversified topography, a variety of factors which make it a desirable area in which to live and work.

How attractive the state's business climate actually is may be seen in figures on recent industrial growth.

For example, Director W. P. Saunders of the North Carolina Department of Conservation and Development reports that in the fiscal year ended June 30, 1958, the state gained 361 new or ex-

The trademarks featured on the cover of the North Carolina survey are representative of over 1,000 industries that have established or expanded plants in the state in the last three years. Space limitation prevented showing more of the trademarks of companies which invested nearly \$500,000,000 in new plant facilities in North Carolina during that period.

panding plants. These represented a total investment of \$243,809,000, new payrolls of \$61,426,000, and 18,294 new jobs. It is noteworthy that these figures are greater than for any comparable period in the state's history.

Further, during the first half of the calendar year 1958, the state also set new records for industrial expansion. In that period there were 225 new plants and expansions reported, with investments totaling \$111,719,000, employment of 10,140 persons and additional payrolls totaling \$31,614,000. This compares with 177 new plants and expansions, \$58,926,000 investment, and 8,075 employment with payroll of \$23,897,000 added during the first half of 1957.

It is interesting that the gains took place during a period when the nation

graduate training.

The school also conducts a large-scale research program aimed at assisting mills to make their products better or more cheaply, and to develop new products.

Beside holding leadership in textiles, North Carolina is tops in the nation insofar as the manufacture of tobacco products is concerned. In 1957 the 100 tobacco plants in the state provided employment for approximately 46,000 persons, with output valued at \$1,843,000,000.

The operation of processing plants, involving stemming and redrying, are an important part of the tobacco industry in the state. These processing firms handle leaf for both domestic and export trade.

Playing an important part, too, in

Carolina many allied enterprises which supply the materials used in the manufacture of furniture.

Located in High Point is the Southern Furniture Exposition Building. Winter and summer markets, in January and July, as well as mid-season markets, in April and October, are held each year and attract more than 20,000 buyers annually from all over the nation as well as from foreign countries.

Adding to the diversity of manufacturing in the state is the metalworking industry which is also one of the fastest growing. The more than 400 metalworking plants in the state employ in excess of 30,000 persons, and the value of output is over \$354 million.

In this same diversified pattern is the electronics and electrical-products industry which is relatively new to the state. There are more than 40 plants in this field providing employment for some 26,000 workers.

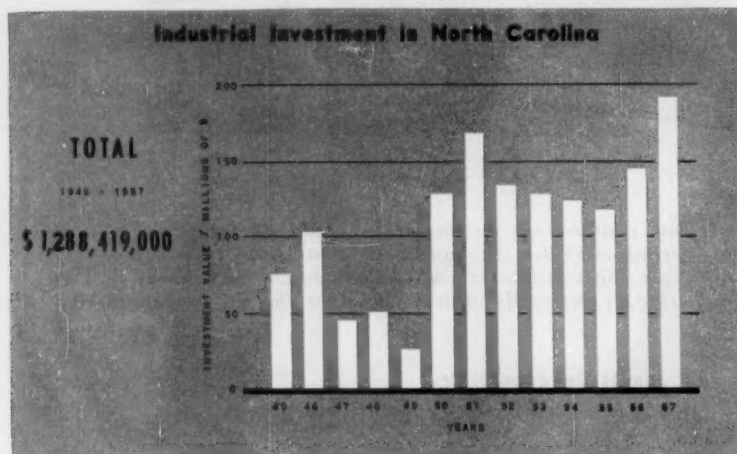
As shown in the latest figures released by Mr. Saunders, an excellent gain was made during the first half of 1958 by the food and kindred products industry. New investments in this field alone total more than \$13.5 million, ranking second only to metalworking with new investments amounting to slightly over \$15 million. Textiles and lumber products ranked third and fourth in new investments.

Why have these various industries located in North Carolina? Here are some typical comments of executives on this subject:

Joseph T. Bailey, general manager of the General Electric Company plant at Hendersonville: "Opportunities for growth, the favorable business climate, a plentiful and cooperative labor supply, availability of utilities and transportation, combined with an ideal climate and living and recreational facilities were major factors in influencing General Electric's selection of Western North Carolina as a location for their modern Outdoor Lighting Plant."

Oliver J. Greenway of Philadelphia, vice president of International Resistance Company, which has plants at Asheville and Boone: "Our experience has assured us that all that was said about the labor was not one bit exaggerated. They are good healthy people, willing to work and quick to learn."

J. A. Babcock, manager of the Westinghouse Meter Plant at Raleigh: "We have been especially pleased with the type of people who have sought employment at Westinghouse . . . The



as a whole was in a general business and industrial recession.

The new enterprises have been and are being added to an existing broad base of diversified industry that has long contributed to the state's economic stability and which serves as proof of its affinity for business and industrial development.

It is an established fact, for instance, that North Carolina leads the nation in textile manufacturing, and the more than 1,100 textile mills in the state provide employment for an average of 230,000 workers.

As a corollary to this, North Carolina State College has the world's foremost School of Textiles. The institution's primary function is to educate young men in the technology and management of all types of textile mills, and it offers both graduate and under-

North Carolina's economy are the industries allied to tobacco, such as cigarette paper manufacturing, pipe manufacturing and so on.

Another strong factor in North Carolina's industrial background is the furniture industry. Ranking as the fourth largest in the state, this industry has more than 350 manufacturing plants employing close to 39,000 persons and having a total output value of approximately \$376 million.

The state leads the nation in the production of wooden household furniture and accounts for well over one fourth of all wooden dining room and bedroom furniture. In the production of upholstered household furniture the state occupies second place and accounts for more than one sixth of the nation's total. The growth of this industry has, of course, brought to North



Under construction at Wilson, North Carolina, is this \$3 million plant of Swift & Company. Representative of the upsurge in food processing in the state, the plant will employ 200 persons and draw livestock from the Eastern North Carolina region. This area is rapidly becoming a major producer of cattle, hogs and poultry, supplanting the once dominant tobacco and cotton crops.

spirit of cooperation in the community and among our employees has convinced us that Raleigh and North Carolina were the right choice for Westinghouse."

W. E. Gladding, manager of the Du Pont plant at Kinston: "... Most gratifying to Du Pont is the favorable relations it is experiencing with its people. Employee morale is high; productivity is increasing, and the low turnover in the work force indicates the stability of employees. Added to this is the pride the new Du Pont people have taken in their jobs and their expressed satisfaction with company benefits and working conditions ..."

C. E. Blass, manager of the Talon, Inc., plant at Woodland: "We found in North Carolina a very fertile field for industrial expansion. The area is full of highly intelligent, capable, potential industrial employees ... My personal conviction is that North Carolina has a tremendous potential for further healthy industrial expansion ..."

Harvey Eastman, manager of the Sevier Mill of The American Thread Company, Inc.: "The most important advantage of this location is the character of the people who live and work in this area—the cooperative spirit of our employees and the local businessmen."

Sheldon P. Smith, general manager of the Charlotte Division, Douglas Aircraft Company, Inc.: "The Charlotte

Division ... has found this Southern atmosphere most conducive to the production of guided missiles. Above all else, we have discovered that the people of North Carolina readily adapt themselves to the various skills required for the development and manufacture of these intricate missiles."

Charles P. White, president, Kohler & Campbell, Inc., Granite Falls: "The ability of the workers to attain the high

level of skill necessary for the exacting art of piano making and yet maintain a good level of productivity has in a large measure, been responsible for the success of our operation."

Government and Finances

It is not so paradoxical as it sounds that North Carolina may be considered as a "conservative-progressive" state, for it has managed to maintain a remarkable degree of stability in government and a balanced budget while at the same time making rapid over-all progress.

In short, North Carolina may be regarded as a conservative state in that it shuns deficit financing, takes pride in making a habit of good government, and offers no "give aways" as inducements to new industry. It is progressive in that it is continually planning for the future and gearing its policies to the changing spirit of the times.

In the latter pattern the state's 1955 General Assembly authorized a thorough study of North Carolina's financial set-up, with particular emphasis on tax laws.

Most of the recommendations resulting from the study were put into effect by the 1957 session. This brought about material changes in the method of computing and levying state taxes but did not violate the basic concept that state government should be supported without taxing tangible property, real or

WHY TAR HEELS?

In Colonial days, North Carolina was a big producer of tar, pitch and turpentine.

During one of the fiercest conflicts of the Civil War, North Carolina troops felt they had been let down by a regiment carrying the colors of another state, and thus carried chips on their shoulders when they pulled back from the front after the battle.

"Any more tar down in the Old North State boys?" members of the other regiments taunted the battle-weary North Carolinians.

"Not a bit. Jeff Davis bought it all up," retorted the Carolinians.

"How's that, what's he going to do with it?"

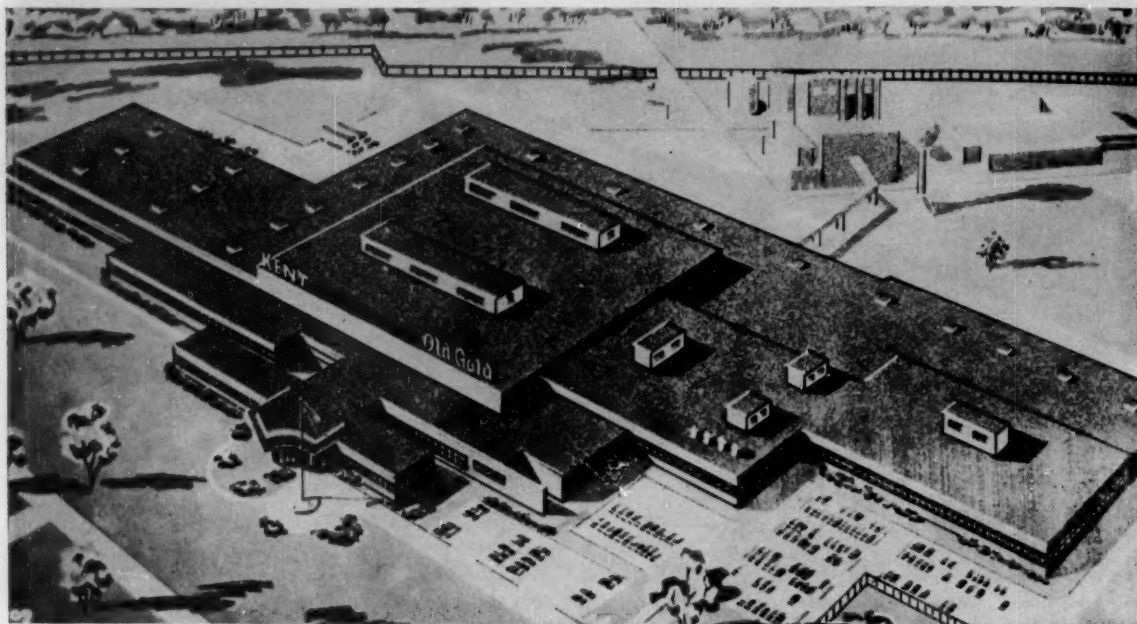
"Hes gonna put in on your heels to make you stick better in the next fight," answered the soldiers from the land of tar, pitch and turpentine.

General Lee, hearing of the incident, remarked:

"God bless the Tar Heel boys."

The nickname stuck.

—Source, Creech's "Grandfather Tales of North Carolina"



Shown in an architect's sketch is the huge facility of P. Lorillard Company at Greensboro. The installation has been termed "America's newest and most modern cigarette plant." It produces the popular Old Gold and Kent brands of cigarettes.

personal. The state had pioneered in the field of indirect non-property taxation a generation ago and is committed to that policy.

In the new tax laws which were effective July 1, 1957, the state accomplished what was described as "the most business-like approach to measuring corporate income on interstate operations."

The laws redefined net income and provided up-to-date allocation formulas that fairly apportion corporate net income and capital franchise taxes of interstate companies.

According to a booklet prepared by the state's Department of Tax Research and published by the Department of Conservation and Development, the new tax laws are such that: "Both corporations and individuals will find that the tax structure is fair and reasonable, administered uniformly and equitably and that the revenues are spent wisely and economically. Since a greater portion of the cost of schools and other functions is borne at the state level than in most states, taxpayers will find comparatively low and reasonable local property taxes. The principal levies are by the state on the basis of ability to pay."

The Department of Revenue has primary responsibility for administering the tax laws. It is headed by a commissioner appointed by the Governor and is responsible only to him.

In recognition of the fact that no formula could be devised which would fit every individual taxpayer's situation, the state set up a Board of Tax Review. Functioning just as its name implies, the board hears and passes upon appeals from decisions of the Commissioner of Revenue in contested cases. The board has responsibility for determining what part of the income of firms doing business in several states should be taxed in North Carolina.

It is important, too, that although every reasonable effort seems to have been made by statutes to achieve equity and uniformity in tax liability, there is provision for appeal to the courts from any decision of any administrative officer or board.

Natural Resources

Along with its good business climate and reservoir of efficient workers, North Carolina has a variety of other resources, natural to the area, which provide essential elements for both new and expanding industry.

All-important water, for instance, is in rich supply throughout the coastal plain area of the state as a result of high average annual rainfall. Large ground water supplies are available, and surface water supplies are large and generally have good chemical qualities.

Moderate supplies of high quality ground water are available in the Pied-

mont Plateau and mountain regions from bedrock. Large industrial and municipal supplies are obtained from streams and rivers.

Taking active measures to conserve and develop the water resources in all parts of the state, North Carolina has a program underway covering both ground and surface water.

Through the cooperation of state and federal agencies, an important contribution to the water resources program has been a long-time study of water supplies. Records of flow and chemical analyses of streams and rivers all over the state have been made and are available.

The 16 river basins in North Carolina are Hiwassee, Little Tennessee, French Broad, Watauga, Broad, New, Catawba, Yadkin, Roanoke, Lumber, Chowan, Pasquotank, Tar, Neuse, White Oak and Cape Fear.

Forest resources, important to many types of industries, cover 20,075,700 acres of land in the state. These acres are protected by 136 lookout towers in 88 of North Carolina's 100 counties, and the state also operates four tree nurseries.

With a constantly increasing annual production value, approximately 70 minerals are of commercial importance in North Carolina. Latest available figures show that the state produces

nearly 100 per cent of the nation's supply of primary kaolin, 70 per cent of ground and scrap mica, 78 per cent of sheet and punch mica, 42 per cent of feldspar, as well as tungsten, talc, granite, limestone, marl, gravel and sand in commercial quantities.

Throughout the state are large deposits of clays and shales suitable for the manufacture of heavy clay products. North Carolina also leads the nation in the production of pyrophyllite, and the largest tungsten mine in the country is near Henderson.

The largest deposits of lithium ore in the Western Hemisphere are found in North Carolina. Altogether, there are some 75 companies in the state engaged in mineral and rock extraction, and they employ a total of more than 4,000 persons.

Recently, greatly increased interest has been attracted to the lithium re-

serves, and to the production of titanium. Several large companies are producing these "wonder metals" in the state, and expansion in these fields is continuing.

North Carolina's seacoast provides a valuable resource — apart from its recreational attractions — through its catch of seafood. Being developed aggressively, this industry employs more than 35,000 persons and operates some 4,600 boats.

Included in the catch to be sold as fresh fish, frozen, salted or canned are shad, herring, striped bass, trout, croakers, spot and sea mullets. Menhaden are most important for oils and animal foods.

Taken from North Carolina's coastal waters, the most extensive along the Atlantic Seaboard, are fine oysters, clams, shrimp and scallops. The annual seafood catch for the state averages

approximately 220,000 tons.

The state's seafood industry is regulated by the Division of Commercial Fisheries of the Department of Conservation and Development. The Division also cooperates with the University of North Carolina and other agencies in scientific studies of various aspects of sea life.

Available Labor

Available in North Carolina is an extensive reservoir of efficient and dependable workers for industrial employment. And, as noted in the typical comments of executives earlier in this report, they are easily trained in the highest skills. More than 99 per cent of the state's workers are native-born, are largely home owners, and have an important stake in their citizenship.

Latest estimates are that there are about 175,000 workers available for industrial employment in the state. An-

FACTS ABOUT NORTH CAROLINA

LEADERSHIP: North Carolina leads the Southeast in population and industrial and agricultural output. It leads the nation in manufacture of textiles, tobacco and household furniture. Its aggressive leadership in industrial research is symbolized by its unique "Research Triangle".

PEOPLE: Latest estimates give a total population of 4,498,000. There are 576 incorporated towns, and the population is divided roughly into a third urban, one-third rural on farms, and one third living in rural areas but non-farm. The state's farm population is largest in the nation.

GEOGRAPHY: Half the population of the United States lives within a 500-mile radius of North Carolina. The state covers an area of 52,712 square miles, of which 49,097 is land and 3,615 is water. There are three distinct areas: Mountains, the Piedmont hilly region and the coastal plain.

GOVERNMENT: Long noted for its stable and forward-looking government, the state pioneered state supported school and highway systems. It leads the South in these services although state taxes have not been increased since 1933 and in 1957 were reduced by placing into effect the most modern system in the nation for taxing business engaged in multi-state operations.

EDUCATION: Enrollment in North Carolina's modern and progressive public schools is well over a million students. In addition, there are 63 senior and junior institutions of higher learning.

PUBLIC HEALTH: Each of the 100 counties has county health services. Last year there were 13,980 hospital beds, or 3.3 beds for each 1,000 of population. The State Board of Health governs sanitation in the public interest all over the state.

COMMUNICATION: The 47 daily newspapers have a total circulation of 1,078,322, and there are 170 weeklies with a circulation totaling 377,263.

There are 160 radio stations, 127 AM and 33 FM. Of the 12 television stations, 11 are VHF and one UHF.

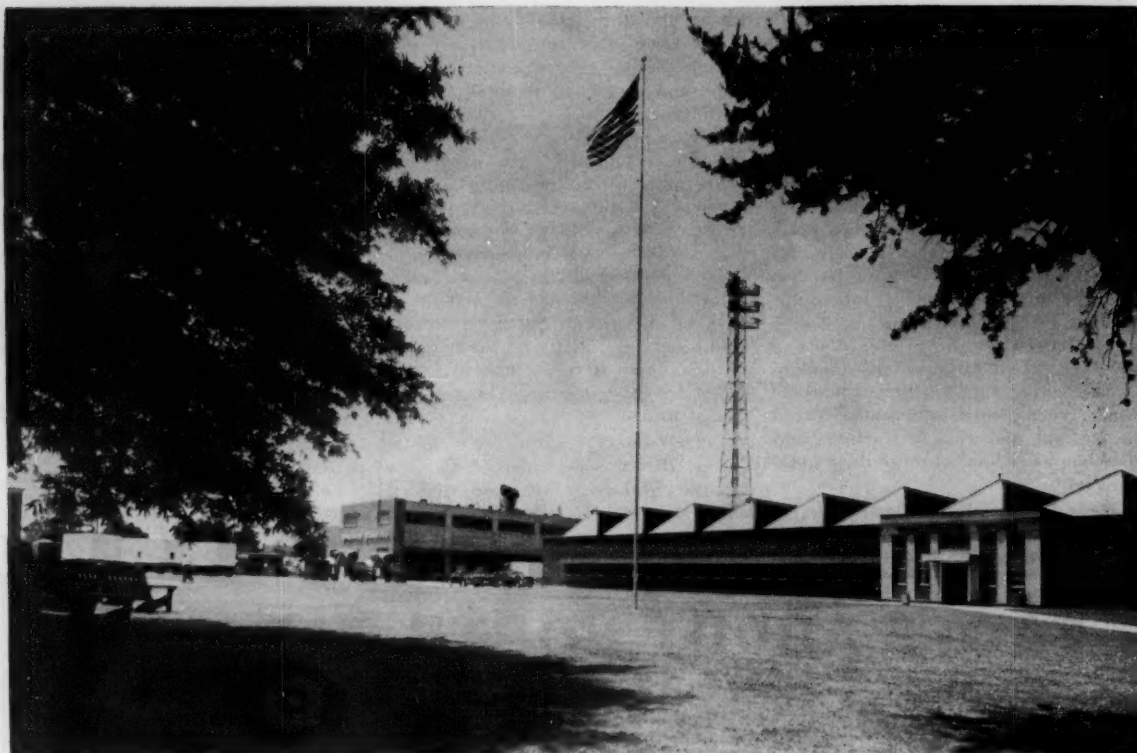
TRANSPORTATION: As of January 1 this year North Carolina had 70,477 miles of highways; 36,951 miles of which were hard-surfaced. This is the largest maintained system in the nation. Approximately 775 miles of the interstate system will be in the state, representing an investment of more than \$350 million. Twenty-six railroads operate 4,387 miles of track. Six commercial airlines offer service to some 114 airports, and there are ocean shipping terminals at Wilmington and Morehead City. Bus and truck lines serve virtually all communities.

CLIMATE: Moderated by the Gulf Stream off the coast and by a protective barrier of high mountains on the west, North Carolina has a mild climate the year around. The annual mean temperature is 59 degrees, ranging from an average of 42 degrees in winter to a high of 75 degrees mean in summer. The average annual rainfall is 48 inches.

VARIETY VACATIONLAND: There are 33 state and federal parks, forests, and historical sites. Included are the Great Smoky Mountains National Park and the Blue Ridge Parkway, along with the Cape Hatteras National Seashore Area.

MINERALS: Industrial minerals are the most important among the more than 300 kinds of minerals and rocks found in the state. It has 80 per cent of the nation's lithium deposits, and tungsten is produced in important volume. North Carolina produces nearly all of the nation's primary kaolin, 70 per cent of mica, 35 per cent of feldspar. Phosphate and titanium deposits are being rapidly developed.

FORESTRY: The second largest lumber producing state in the Union, North Carolina is the fifth largest in the nation. Its 20,075,700 acres of forest land cover 59.5 per cent of the area of the state.



This is a view of the Burlington, North Carolina, plant of the North Carolina Works, Western Electric Company, Inc. This plant is engaged in the manufacture of electronic military devices and systems for the United States Government.

other estimate is that there are 50,000 native North Carolinians among those who have left to find employment in other areas who would return if there were suitable opportunities for jobs. Many of these people are skilled craftsmen.

Contributing to the high educational level of North Carolinians is the fact that under state law children are required to attend school until they are 16 years of age—the equivalent of two years of high school. Since youths under 18 years of age cannot work in manufacturing plants without special permits, a good percentage of the students complete high school. There are now more than a million students enrolled in the public schools of North Carolina.

Since the state has a high birth rate, and rapid mechanization of farms means that only a small part of the expanding population can be absorbed in agriculture, industry is assured of a continued reserve of intelligent workers in the years to come.

Excellent facilities are available in the state to assist industry in worker

training programs. Included in these are the Division of College Extension at North Carolina State College, the Division of Apprenticeship Training of the State Department of Labor, and the Division of Vocational Education of the Department of Public Instruction.

The latter's programs of special interest to industry are (1) Pre-employment training for high school pupils in skilled trades; (2) pre-employment training for young adults in skilled trades; (3) job instructor, job relations, and job methods training for supervisors; (4) related instruction training for apprentices and (5) extension training for employed workers.

Right to Work

An important aspect of North Carolina's labor picture, and one that is of very much interest to any prospective industrialist, is the state's Right to Work law which was ratified by the General Assembly on March 18, 1947.

It is described as: "An act to protect the right to work and to declare the public policy of North Carolina with respect to membership or non-membership in labor organizations as affecting

the right to work: To make unlawful and to prohibit contracts or combinations which require membership in labor unions, organization or associations as a condition of employment: To provide that membership in or payment of money to any labor organization or association shall not be necessary for employment or for continuation of employment and to authorize suits for damages."

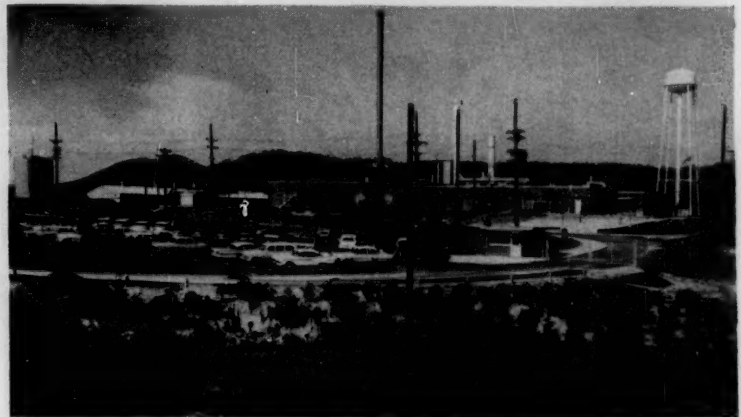
North Carolina's basic concept in this connection and its fundamental belief in the freedom of the individual is most aptly expressed in the first section of the Act, which declares: "The right to live includes the right to work. The exercise of the right to work must be protected and maintained free from undue restraints and coercion."

The state's rapid industrial growth is notable evidence of the fairness and effectiveness of that concept. It is an interesting fact, too, that North Carolina has the lowest percentage among all the states of organized nonfarm workers.

Adequate Power

Providing adequate electric power to

The nation's first full-scale plant for the manufacture of hyper-pure silicon was built by Du Pont near Brevard. Seen here from the southeast side, the plant is located on a 10,000-acre tract of rolling woodland in Western North Carolina. It has a capacity of 70,000 pounds of silicon a year.



all parts of North Carolina are four major power companies. These are Duke Power Company which operates principally in the Piedmont area; Carolina Power & Light Company which serves the east, southeast and several counties in the west and northwest; Nantahala Power and Light Company operating in the mountains of the far western area, and Virginia Electric & Power Company which serves several northeastern North Carolina counties.

By the end of 1958 the state's installed capacity for generating electricity will total 3,819,500 kw. This will be double the capacity that the state had in 1950.

Rural Electrification Administration facilities also are widespread, and North Carolina ranks second among states in the number of electrified farms.

This, along with telephone service to rural areas, has contributed greatly to the attractiveness of rural living. It also has promoted a stable and reliable source of labor and supervisory personnel with many interests in common with management.

Natural gas is available in many sections of the state, and constant extensions are being made to increase the number of communities being supplied with gas. Major supplier to the several gas companies in North Carolina is Transcontinental Pipe Line Corporation.

North Carolina is moving also into the field of producing atomic energy for peaceful purposes.

Working toward development of a nuclear power plant is the Carolinas

Virginia Nuclear Power Associates, Inc. with headquarters at Charlotte. This company was organized by Duke Power, Carolina Power & Light, South Carolina Electric & Gas, and Virginia Electric & Power.

With the cooperation of the Atomic Energy Commission, this corporation plans to develop and activate by mid-1962 a reactor with a rating around 17,000 kw of electricity.

By designing, developing and operating its own atomic power plant, the corporation expects to gain a practical working knowledge of reactor design, installation and operation. As a result of this, contributions will be made toward overall progress in developing economically feasible nuclear power reactors.



The American Machine & Foundry Company laboratory at Raleigh is one of the South's most advanced research units, leading in projects on tobacco, as well as machinery and other ordnance products.



Here are some members of the site location team of the North Carolina Department of Conservation and Development. Seated is Walter Harper, industrial development administrator. Standing (left to right) are Industrial Development Engineer Cecil Bell, Gerald Albright, John D. Little, Jr., C. D. Kirkpatrick, Richard P. Mauney and William C. Guthrie.

Besides all the new and constructive moves such as this there may be added other outstanding factors which make North Carolina a prime choice for the industrialist seeking a plant site in this part of the country.

Included in these additional factors, which will be treated at length in a subsequent part of this report, are the state's position in relation to markets, its unusually diverse recreational areas, its cultural background, its excellent educational facilities, and its outstanding system of highway, rail, motor carrier and airplane transportation.

Aid to Industry

Through local development organi-

zations, more than 200 communities in North Carolina are in a position to participate in the construction of buildings for industrial purposes.

Industrial property is acquired and a building is constructed in accordance with requirements, plans and specifications of the industry. Through these groups buildings can be made available on a reasonable lease basis with option to purchase.

Working on a statewide basis is the Department of Conservation and Development whose mission "is to conserve and develop the natural resources of North Carolina for the common good of all her people."

The Governor himself heads the

policy-making Board of Conservation & Development, whose membership of 18 leaders in the industrial and professional life of the state comprises a blue ribbon directorate—one that any progressive corporation would be proud to claim.

Under the leadership of Director Wm. P. Saunders, the Department of Conservation & Development embraces specialist staffs, not only in developing new industry, but in conservation of natural resources and coordination of development enterprise with other state and federal departments.

The Assistant Director, J. Edgar Kirk, is also secretary of the State Ports Commission.

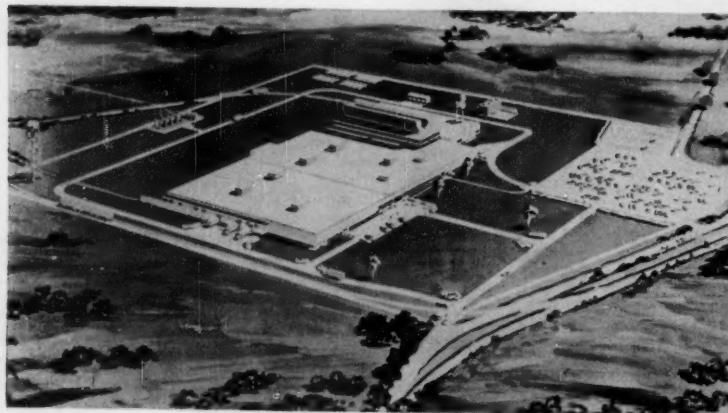
Specifically, there are 8 divisions as follows: Commerce & Industry, State Parks, Forestry, Mineral Resources, Water Resources, Inlets and Coastal Waterways; Commercial Fisheries, Community Development, and State Advertising and Travel Development.

Members of the Board of Conservation and Development are Miles J. Smith, of Salisbury, first vice chairman; W. J. Damtoft, Canton, second vice chairman; Charles S. Allen, Durham; W. B. Austin, Jefferson; F. J. Boling, Siler City; H. C. Buchan, Jr., North Wilkesboro; Seroop W. Enloe, Jr., Spruce Pine; Voit Gilmore, Southern Pines; R. M. Hanes, Winston-Salem; Leo H. Harvey, Kinston; Charles H. Jenkins, Ahoskie; Amos R. Kearns, High Point; H. C. Kennett, Durham; R. W. Martin, Raleigh; Cecil Morris, Atlantic; Hugh M. Morton, Wilmington; W. Eugene Simmons, Tarboro, and T. Max Watson, Spindale.

In this group are prominent bankers, manufacturers, retailers and distributors, financiers, a lawyer, representatives of agriculture and the tourist industry, and others.

Within the board, therefore, are men who are fully familiar with and who understand all aspects of business and industry. In addition to lending their help toward promoting the various advantages of North Carolina as a good plant location, they also are ready, willing and able to give tangible help to the site-seeking industrialist.

Altogether, they make up a team that has been and is continuing to be a potent force in presenting North Carolina's good points throughout the nation and even in other parts of the world.



Pittsburgh Plate Glass Company has under construction near Shelby a 350,000-square foot plant on a 135-acre site to manufacture fiber glass "miracle yarn." Costing \$20 million, it will employ 800 persons with an annual payroll of some \$6 million.



Businessman Governor

*Wearing a winning smile and
a white carnation, North Caro-
lina's super-salesman Governor
Luther H. Hodges is doing a
terrific job in attracting a variety
of new enterprises for his state.*

As a super salesman for North Carolina, Governor Luther H. Hodges is second to none in effectiveness and ability to perform. In short, he is a man who knows what he is doing and how to do it.

And his background is not at all what you expect to find in a Governor's office.

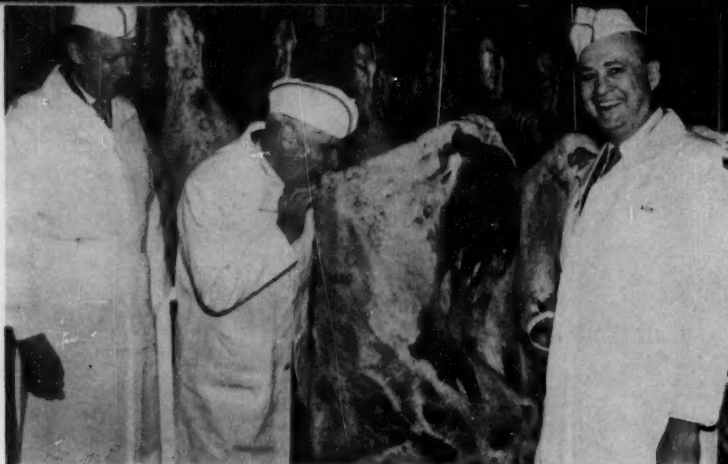
Luther H. Hodges is a business man, not a professional politician. He is a natural salesman. His charm is well-nigh irresistible—and it is contagious.

Take, for instance, his meeting with network broadcaster Alex Dreier this year when he headed an impressive North Carolina delegation in Chicago hunting new industry for the Tar Heel State.

In the pre-broadcast warm-up, Mr. Dreier led with his right:

"What's the idea, Governor, in coming up here to try to steal our industries?"

"That's a good question," shot back the Governor, "and one that I'm happy to have the opportunity of answering . . . We aren't here to steal anybody's industries. We don't want industries that have to be stolen. We are here to tell North Carolina's story to industry



Governor Hodges, who doesn't hesitate to gag it for a newsworthy picture, here sinks his teeth into a side of beef on the occasion of the opening in Charlotte of a new Armour & Company plant.



In a discussion of aircraft, North Carolina's chief executive chats here with Donald Douglas, chairman of the board of Douglas Aircraft Corporation, whose plant in Charlotte manufactures Nike missiles.



Welcoming Swift & Company to North Carolina on the occasion of that firm's locating a plant in Wilson, Governor Hodges (left) chats with Swift Executive Vice President E. D. Fletcher and Wilson Industrial Council Chairman S. M. Cozart.



HARD SELL...

that should be expanding into the great, and largely untapped, Southern market. We are here to invite progressive industry, with an eye to the future as well as the present, to participate with us, as corporate citizens, in the advantages of doing business in the state that is leading the south in industrial research."

"Just repeat that over the air, Governor Hodges. I am sure you and your colleagues will find ready listeners here in Chicago and throughout the Middle West," responded the broadcaster.

And how warm the welcome was, how eager Midwest industrialists were to hear the North Carolina Governor, is revealed in the following editorial that appeared in the *Chicago Tribune* as the Tar Heels took their leave:

"Governor Hodges made a favorable impression on Chicago business men, for he was thoroughly acquainted not only with the product he was selling, but with the problems of business management. For many years he managed the textile mills of Marshall Field & Company, and he was a vice president of the company when he retired to be-

gin a new career of public service.

"Governor Hodges is a fine salesman as well as a great governor of his state. He is always a welcome visitor to Chicago."

More light on what the Governor is selling and how he is selling it is contained in his own words from a recent speech:

"My experience before entering politics and government in 1953 involved more than 30 years in the textile manufacturing and merchandising fields. I know from firsthand experience the incredible results of economic productivity, and how quickly this productivity can be translated into better living for our people, their families and the communities in which they live.

"Realizing these facts, I have made industrial development a major goal for North Carolina. I consider industrialization one of the basic tools which we in North Carolina must use if we are going to balance our rapidly changing agricultural economy and raise our low per capita income. This is my number one goal as governor—to increase the per capita income of our people

and to raise the standard of living of all our citizens."

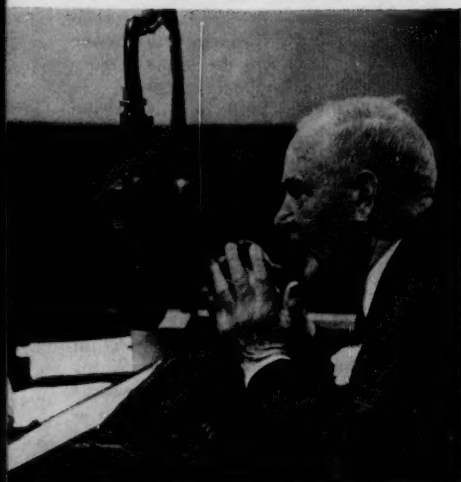
These words reflect, certainly, the cordial, cooperative attitude that Governor Hodges has toward the plant site seeker. In other comment in the same speech, the Governor stressed additional points which are of primary importance to the prospective industrialist.

"It is our responsibility," he declared, "to have available to people who come to our state, either to live or to work or to build a factory, to have good schools, both public schools and colleges and universities, good health programs, hospitals, mental institutions to take care of the mentally ill, good highways, clean entertainment and recreation.

"We should recognize once and for all . . . that people are looking for these things. They are not interested in low wages or give-away programs or gimmicks. They want to pay their own way. They want to be good individual and corporate citizens, and it is up to us in government to see that they have an opportunity to be both.

"In keeping with this idea," he continued, "we have tried in North Caro-

... AND SOFT SPOKEN ...



Being interviewed by Alex Dreier on the National Broadcasting Company network, Governor Hodges gives his sales pitch on what North Carolina has to offer industry.



Inspecting wool fiber at the A. & M. Karagheusian, Inc., plant in Aberdeen are (left to right) company President Steele L. Winterer, Plant Manager J. Cecil Baith, and Governor Hodges.

lina to take a look ahead as to where we are going to be in the various fields of government. We have asked our department heads and agencies and institutions to tell us what their plans for 1965, what they are doing now, what new things they ought to start and what old things they ought to drop to meet the day that is ahead. We are taking a new look at our age-old constitution. We hope to revise it. There are commissions studying the financing of our public schools, the revision of the curricula of our entire system of public school education, the judicial system of the state so as to create more respect for the courts and for the law.

"A Governor's Farm Advisory Committee," he said further, "is helping us make detailed studies county by county as to what our farm problems are and how we are going to attempt to solve them.

"We have formed a Business Development Corporation on a private basis to lend money to small institutions, small businesses and industries, that cannot get their long-term needs through banks or insurance companies."

About "give aways" for luring new industry Governor Hodges is emphatic:

"North Carolina gives no special concessions. The kind of new industry we want knows if you give something away now, you are bound to pay for it later. We welcome industry as a corporate citizen to grow with us. Our appeal is to vision, of looking ahead to the next 10 years or so—not necessarily now," he said.

In this way he reiterated his pledge that North Carolinians will do their best to continue their cooperative attitude both to new industry and to the established enterprises in the state.

Although Governor Hodges is unequivocal in his devotion to and faith in North Carolina, he also is a booster of the South as a whole, for it is his belief that development in any part of the region is of benefit to the whole and that North Carolina will get its share.

He bases this confidence on what he calls the state's "tremendous potential." He adds: "We have the people, the resources, the know-how and the all-important determination to strengthen our position of leadership and take full

advantage of the great economic transformation that is today re-shaping the destiny of the South."

The Governor observes that proof of the pudding is very much evident in the figures, quoted earlier in this report, on North Carolina's record-breaking number of new plant developments during the past fiscal year.

In an interview in his office, Governor Hodges told this writer that one of the key factors in his state's rapid growth has been the productivity of the people. "In North Carolina," he said, "an industrialist can expect to get an honest, efficient return on his investment in his employees."

Governor Hodges is at his best in extolling the virtues of North Carolina workers:

"Experience of plant after plant expanding here is that North Carolina labor beats any production budget they've ever set up," he said.

More of the Governor's faith in North Carolina's potential was expressed in a speech he made July 11, 1958, during the opening ceremonies for the new silicon plant at Brevard of



When in Chicago on an industrial procurement mission for his state, Governor Hodges visited with his old friend Adlai E. Stevenson. Here the Governor assures Mr. Stevenson that he doesn't want to take anything away from Chicago but wanted industrialists to think about North Carolina for new or branch plants.



While on his Chicago visit, Governor Hodges was interviewed by Basil L. Walters (right), executive news editor of the Chicago Daily News.

NORTH CAROLINA

However, his background of achievement is significant.

Luther Hartwell Hodges was born near Leaksville on March 9, 1898. Following service in World War I and his graduation from the University of North Carolina in 1919, he joined Marshall Field & Company that same year as secretary to the general manager of the Leaksville-Spray Mills.

In 1927 he was made manager of the blanket mills, and then became in 1934 production manager for all the mills in the Leaksville area. Continuing his advance, he became in 1938 general manager of the 29 Field mills in the United States and abroad, and in 1943 was named vice president of Marshall Field.

After 21 years of service with Field, he resigned to devote his entire time to public service. During those years in business he had been commander of his post in the American Legion, served as district governor of the Rotary Club in North Carolina, president of the Rotary Club in New York City, and spent much time in furthering Y.M.C.A. and youth movements in general. These are only a few of the public spirited things he has done and is continuing to do, apart from the position he holds as chief executive.

After leaving the Marshall Field Company, Mr. Hodges served with distinction in various quasi-diplomatic capacities abroad and was, at one time, chief of the Industry Division of the E.C.A. in Germany.

Returning to this country in 1953, he was nominated lieutenant governor of North Carolina and was elected to that position in the same year. He became governor in November of 1954 after the death of Governor William B. Umstead. In 1956 he was elected for a four-year term expiring in 1961.

During his career as the 92nd man to serve as governor of North Carolina, he has enjoyed popularity unusual in a state with historically strong factions within its dominant Democratic Party.

Referred to sometimes as North Carolina's most eloquent apostle of discontent, Governor Hodges has earned this appellation by having asserted: "I am not satisfied with where we are. We must be willing to try new methods and think and act boldly."

Thus with his remarkably constructive restlessness, never willing to settle back and be satisfied merely with past accomplishments, Governor Hodges is leading North Carolina into a great new era of growth and development.

E. I. du Pont de Nemours & Co.

He told his audience there that the state's secret weapon is the individual North Carolinian—"about four and a half million of them who know the true meaning and the value of genuine friendliness and mutually beneficial co-operation."

He described this weapon as an intangible, yet unique quality possessed by the people of the state, a quality that is easy to detect but not easy to duplicate. "That is why I know that North Carolina will prosper."

He stressed further: "The decision to locate this new DuPont facility here in North Carolina is, I think, a sort of testimonial to the truth of the things I have been saying. I say this because DuPont is no stranger to North Carolina. The plant here represents the company's second largest investment in this state, the first being the multi-million dollar plant at Kinston which employs approximately 2,000 people in the production of Dacron polyester fiber.

"Speaking from my many years of experience in industry, I think I am on

sound ground when I say that had the company's experiences in Kinston not lived up to the claims we had made for our state and our people, it is very unlikely that we would have an occasion for gathering here today."

Governor Hodges emphasized the benefits to be derived from the new plant, then made this pertinent point: "It is important that we remind ourselves constantly that the successful industrial operation is not a one-way proposition. The community, the county and the area must share in the responsibility for that success. When good community-industry relations are maintained, both the community and the industry share in the profits of success. When these relations are not maintained, both are hurt and the results can be disastrous."

At this point you might well ask, "What is the background of this man, and how is he able to say and do all these things so effectively?"

A lot of the answer to that rests, of course, in intangibles that are difficult if not impossible to explain in words.

RESEARCH TRIANGLE

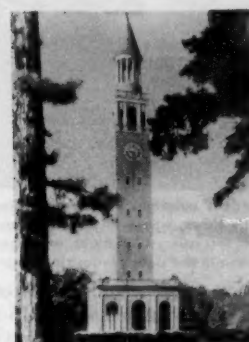
Shaded area indicates site of new Research Park



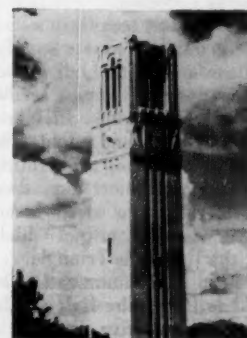
THE TOWERS OF:



Duke University



University of N. C.



N. C. State University

North Carolina's aggressive development in the field of industrial research focuses attention on an unique institution—the Research Triangle.

The climate of research and its application to industrial production is a glamor-coated feature of the state's appeal to expanding industry.

The Research Triangle of North Carolina is composed of three colleges whose outstanding staffs and facilities attract students from all over the nation, as well as from many foreign lands. These three universities, noted for their contributions to basic scientific knowledge, are unique outside a metropolitan area.

North Carolina State College in Raleigh is a distinguished scientific institution. Duke University, universally recognized for its sound research programs, is located in Durham, 30 minutes distant from State College. The University of North Carolina, long known for research in both the natural and social sciences, is at Chapel Hill, 20 minutes from Duke and 40 minutes from State College.

The Research Triangle, where cooperation between the institutions is traditional, is presented to research organizations through the Governor of North Carolina and his committee, which is composed of prominent business leaders.

Research Triangle Park, located in the heart of the Research Triangle, provides unusual opportunity for the establishment of any research facility through The Pinelands Company, Inc., a private corporation established for the purpose of providing sites and services to research firms. A planned area of more than 4,000 acres of beautifully rolling, wooded countryside offers an ideal environment away from crowded cities. An unusual research atmosphere is embodied in the ease of communication, the supply of trained scientific personnel, the cultural living, excellent family educational and recreational facilities, and the institutional resources and attitudes.

Research-minded industry will find an unequaled concentration of facilities in Research Triangle Park. There are

boring universities which offer so vast a scientific reservoir to industries locating in Research Triangle Park.

The School of Medicine and the Duke Medical Center have long been leaders in research and education in the medical fields. Other major areas of Duke research in the physical and biological sciences include low temperature physics, micro-wave spectroscopy, nuclear physics, high polymers, electrochemistry, forestry, marine biology, ecology, radiation, biology, experimental and clinical psychology. Facilities for research in numerical analysis and related fields make use of an IBM 650 computer.

An example is in the news now—high altitude experiments being conducted in the aero-physiology laboratory of Duke University's Medical Center.


Duke does extensive research in the fields of social sciences and humanities, research in economics, political science, history, English and religion. Duke's research in project areas results in expenditures of somewhat more than \$3 million a year on approximately 470 projects.

North Carolina State College has an active research program ranging from nuclear aircraft systems to ceramics, from chemical engineering to boll weevil-resistant cotton plants, from domestic animals to the genetic variations due to irradiations, from evaluating synthetic fibers to basic nuclear studies using the nuclear reactor.

The Institute of Statistics with branches at both State College and the University of North Carolina is world famous. In the North Carolina State College's School of Engineering, important research investigations are currently underway in the fields of spinner rockets for the Redstone arsenal, high speed computers, low temperatures behavior of matter, liquid extraction phenomena and high-structural strength, and high-temperature ceramics.

The Textile Research Center at State College keeps 90 full-time researchers busy, and is internationally known for its important role in the field of textile research and development.

Active research is being carried on in practically every department of the University of North Carolina. Research projects in operation in the natural science departments cover a variety of research topics, from geiger counters to rheumatoid arthritis. Sponsors of the research projects include gov-



Modern aviation was born in North Carolina with the first flight of the Wright Brothers near Kitty Hawk, where in the early days of this century the Wrights did their final research preceding the first successful flight of a powered heavier-than-air plane. Today, research is a dominant theme in the state's industrial progress.

about 18,000 students enrolled in the three institutions within 15 minutes of the Park. Each year, about 1,200 persons trained in the sciences are turned out with either the baccalaureate or graduate degree, and the majority of these young people prefer to stay in North Carolina.

As far as technical assistance goes, there is an adequate supply of people in the area with high school or better education who can be easily trained to do technical work. In North Carolina high schools and night schools, there are 63 programs cooperating with new industries to meet their specific needs. Also, there are seven Industrial Education Centers, one of which is located in the Research Triangle.

Ease of communication is a keynote of the Park. The Raleigh-Durham Airport is only five minutes away, with regular flight schedules to all major cities. Forty flights depart daily, and fast non-stop service is offered to Atlanta, New York and Washington. Two

private airfields are 30 minutes distant.

A network of state and federal highways connect the three cities of the Triangle, with north-south and east-west routes passing through the Research Triangle Park. A four-lane super highway within the Park is on the planning boards, with funds for a segment already appropriated. To the east, there is extensive frontage on the main east-west line of the Southern Railway; on the west is the Durham and Southern Railway. The main north-south line of the Seaboard Air Line Railroad is nearby.

Duke Power Company and Carolina Power & Light Company serve the Research Triangle Park, and the main natural gas line of the Public Service Company of North Carolina runs through the property. The Park offers an adequate supply of water at reasonable rates from the Durham city supply, and waste disposal facilities will be provided to receive acceptable effluent.

Now, a word about the three neigh-

NORTH CAROLINA

ernment agencies, educational funds, and business corporations: General Motors, National Science Foundation, Office of Air Research, Office of Naval Research, Office of Ordnance Research, and the U. S. Public Health Service.

In addition to the teaching departments of the University, these research organizations are actively engaged in studies which come within the province of each: Institute of Fisheries Research, Institute of Government, Institute for Research in Social Science, The Institute of Statistics, The Psychometric Laboratory, The Radioisotope Laboratory, and the Research Laboratories in Anthropology.

The combined library facilities of the three universities contain more than 2,250,000 volumes and an excellent co-operative service consisting of a combined cross indexing and acquisition plan allowing rapid loan of volumes from the libraries, plus an interlibrary loan plan with the Library of Congress. Virtually every engineering and scientific journal published anywhere in the world is available and listed in a published checklist.

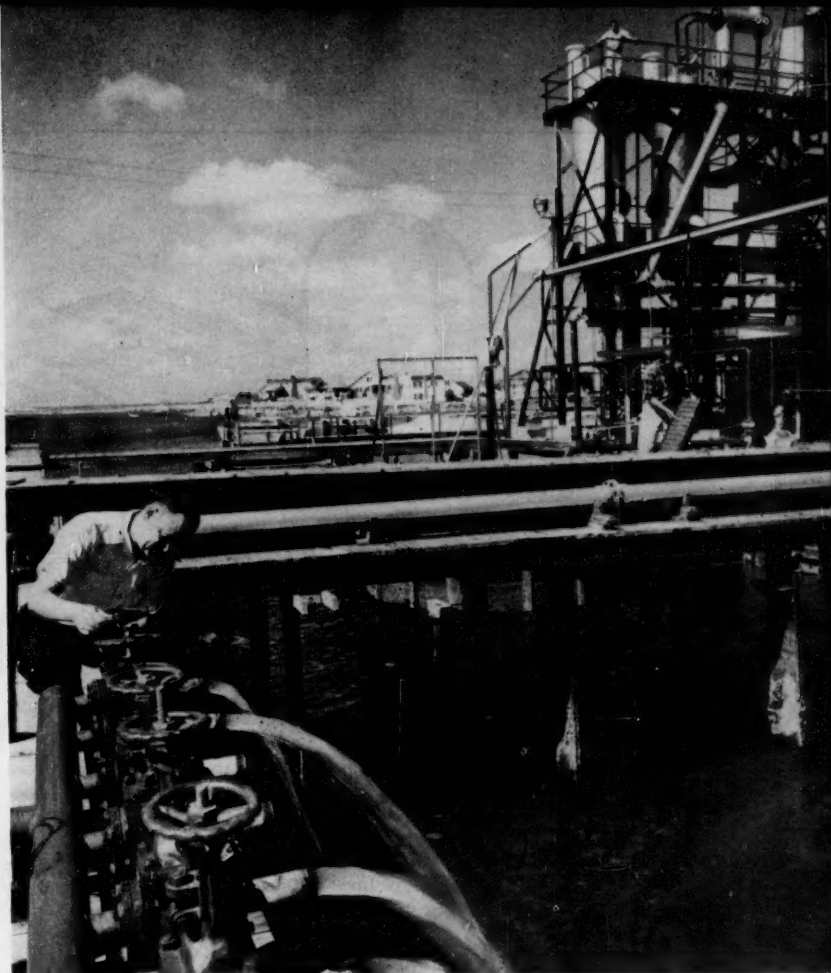
The Research Triangle offers the pleasing combination of unusual cultural advantages amid the quiet tempo of communities which take pride in their individual characteristics. An expression of individuality prevails in the homes of the Research Triangle area, complimented by a refreshing atmosphere, picturesque setting, and a character conducive to flexible living.

Recreational activities and sports, from golf to indoor ice skating, are enjoyed year-round in the mild climate of the region. There are 14 golf courses and six country clubs in the immediate area, and only a few hours away, in an area from the mountains to the beaches, abounds one of America's most versatile playgrounds.

Of special interest to the sports fan are the football and basketball teams of the three universities. Major sports events such as the Dixie Classic basketball tournament attract thousands across the nation.

The cultural assets of the Research Triangle are indeed outstanding. Here is a genuine haven for the lovers of art, music, theater and literature.

Community music societies are numerous, and include the North Carolina Symphony Orchestra, the Chapel Hill Concert Series, the Chapel Hill Choral Club, the Raleigh Civic Music Association, the Raleigh Chamber Music Society, and the Durham Civic Choral



This is part of a huge "still" at Wrightsville Beach, which distills sea water into fresh water at the rate of 25,000 gallons a day. The installation is at International Nickel Company's plant and is part of a long-range research project for studying the corrosive action of salt water on metals.

Society. In addition to the community music societies, there are many excellent university musical groups. A voluminous list of outstanding artists is brought to the area each season, offering a wide selection from which to choose.

Many national theatrical companies of New York plays come to the Research Triangle, and a great interest is shown in several community theaters which offer fine productions regularly.

For persons with literary taste, the area offers unusual opportunities, as evidenced by the fact that a dozen or more active novelists and short story writers have chosen Chapel Hill for their home. Symposiums in which persons of international note take part are scheduled frequently in the Research Triangle.

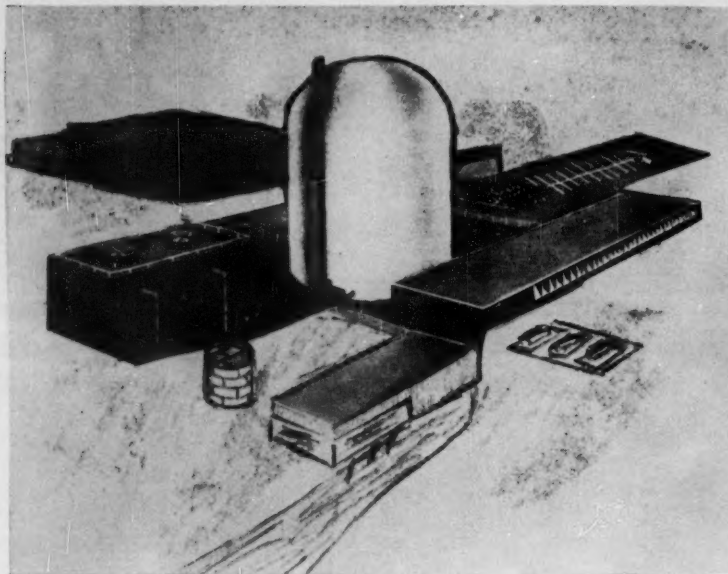
The Research Triangle has extraordinary resources in the creative arts. The North Carolina Museum of Art in Raleigh is unique, as North Carolina established it by the appropriation of

\$1 million for the purchase of the foundation collection. Opened in 1956, it is now the largest and most important museum in the South, with more than 300 objects covering the history of western art from early Greece and Rome through the present.

The original appropriation was used to acquire paintings covering the eight schools of western art ranging over the five centuries of the Renaissance through the 19th Century. A year-round series of special exhibitions are programmed.

Outstanding in the collection are works by the masters Hals, Rubens, Copley, Rembrandt, van Dyck, Reni, Reynolds and Murillo. Special exhibitions and collections are found in Person Hall, the Ackland Art Gallery and The Morehead Planetarium rotunda at Chapel Hill, with equally important special collections at Duke University.

Myriad other items of cultural interest enhance the Research Triangle. The Sarah P. Duke Gardens in Durham and



This nuclear power plant, to be built by a private enterprise group from Charlotte, will be located on the Pee Dee River in the Wadesboro-Rockingham area. To cost \$12 million, the test reactor will be used to test materials and fuel elements that have to withstand exposure to nuclear radiation.

the Coker Arboretum in Chapel Hill are noted for their perennial beauty, drawing thousands annually. The Morehead Planetarium in Chapel Hill offers public demonstrations and lectures daily, and contains one of only two 35-foot orreries of the solar system in the world.

A recent announcement that a \$12 million test reactor will be built in the Wadesboro-Rockingham area, some 85 miles from the heart of the North Carolina Research Triangle, has added fuel to the fire of developing the Park. To be located on the Pee Dee River, the reactor will generate 50 megawatts of heat, and will be the second largest in the United States.

This will be the nation's first engineering test reactor operated by a privately owned service organization rather than by a manufacturing company. It will be used for the testing of materials and fuel elements to be utilized in equipment that must withstand exposure to nuclear radiation, and it will be used to delve into possible commercial applications of atomic energy.

The reactor's importance in attracting a new cluster of collateral and related industries was emphasized by Edwin L. Jones of Charlotte, President of J. A. Jones Construction Company which will be general contractor for the project as well as part owner, and by H. Haywood Robbins of Charlotte, associated with Jones. Particular mention was given metallurgy and alloy research, pharmaceutical chemistry, chem-

ical plants involving atomic processes and by-products, missile fuels and missile design and testing, the development of new atomic radiated plastics and other similar atomic processed structural materials, and food preservation and processing through atomic radiation.

All of this means that North Carolina and its Research Triangle, and privately owned business enterprise, is entering a new frontier of science and productivity, with vast opportunities opening for diversified progress in the entire field of atomic and nuclear physics and chemistry.

Target date for critical operation of the facility is April 1, 1960. Although construction and equipment costs are expected to run about \$12 million, total investment in the test facility will probably exceed \$20 million, once the reactor is put into operation, said Jones. He explained that companies contracting for test space at the facility will make investments of their own in addition to his company's initial investment. He estimated that approximately 500 persons will be employed, with an annual payroll of more than \$1 million for the test facility alone.

Robbins said, "Construction of the engineering test reactor will provide a unique facility in North Carolina which will pave the way for bringing a new type of industrial development to the state. From the national standpoint, it will provide a valuable new research and development facility that will give

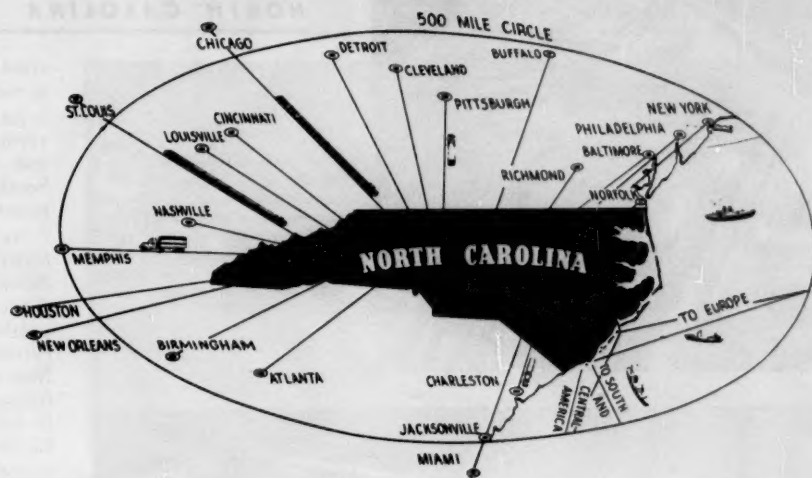
vital assistance to the defense and security of our country. The reactor will also serve to advance our efforts to develop peaceful applications of atomic energy."

The operating and marketing organization for the Research Triangle Park is The Pinelands Company, Inc. Immediately available for industry are tracts of land with fully guaranteed titles, and through Pinelands, arrangements are made to buy or lease the property. Complete services for site improvements, design, and construction of facilities are offered by Pinelands.

The Governor's research Triangle Committee, Inc., and Pinelands co-operate to furnish research firms information concerning the advantages of locating facilities in the Research Triangle of North Carolina.

Officers of Pinelands are Karl Robbins, New York City, Chairman; Romeo H. Guest, Greensboro, President and Treasurer; L. P. McLendon, Jr., Greensboro, Vice President and Secretary; Kenneth M. Brim, Greensboro, General Counsel; and William Maughan, Durham, Land Manager. Voorhees Walker Smith & Smith, New York City, are architects.

Directors are Messers. Brim, Guest and Robbins, Collier Cobb of Chapel Hill, Claude Q. Freeman of Charlotte, George P. Geoghegan, Jr. of Raleigh, George Watts Hill of Durham, Ralph C. Price of Greensboro, and Allan J. Robbins of Streetsville, Ontario.



ACCESSIBILITY:

It's Easy To Ship In And Out Of The State

Accessibility is the keynote to North Carolina's strategic markets. While the state ranks 10th in the nation in population and two-thirds of its residents live in rural areas, there is very easy accessibility to cities and towns due to excellent systems of highways, rail, water and air transportation. Each means of transportation is providing increasingly efficient, safe and quick access to the nation's major population centers and primary markets.

Within 500 miles of the state is more than half the total population of the United States. The major population centers and primary markets within this 500-mile radius are New York, Philadelphia, Baltimore, Richmond, Norfolk, Charleston, Jacksonville, Atlanta, Birmingham, Memphis, Nashville, Louisville, Cincinnati, Detroit, Cleveland, Pittsburgh and Buffalo. Not far beyond this radius are Miami, New Orleans, Houston, St. Louis and Chicago.

North Carolina pioneered highway transportation with such vigor immediately following World War I that it earned the title of "Good Roads State." Over 20 years ago, it adopted the policy of state construction and maintenance of highways, and the result has been consistent development of highways throughout the state rather than varying standards by counties and districts. Today the network, embracing 70,477 miles (as of Jan. 1, 1958) is the largest state-maintained highway system in the

nation. Of this network, approximately 37,000 miles are hard-surfaced — enough paved road, if laid end to end, to much more than girdle the globe at the equator.

A highly significant portion of this highway system is the network of secondary roads providing all-weather access to virtually every community in the state. These secondary roads, reaching into rural areas, are a tremendous asset to industry in that they permit workers to take their places in factories but maintain their homes independent of congested urban residence. Mostly it is a matter of minutes from farm home to factory. Industry is not dependent upon slum dwellers for labor in North Carolina.

Since the passage of the Federal Interstate Highway Act of 1956, Tarheel road planners have given top priority to the construction of 775 miles of modern multilane freeways representing an investment of over \$350 million as its part in the 41,000 mile Interstate Highway System. Work has already been done on 370 miles representing an investment of \$110 million and 40 per cent of the total construction program outlined for North Carolina by the U. S. Bureau of Public Roads.

The Federal Government pays 90 per cent, and the state 10 per cent of the cost of the new freeways which will be built over a period of 13 to 15 years. The \$400 million spent over a 15-year period is estimated to be the total cost

of the Interstate System in North Carolina. This is in addition to the substantial sums being spent on the state's non-Interstate primary routes and its secondary road systems.

Due to the economic stimulus of the building of the Interstate System, it is estimated that \$4 worth of business is generated in an area for every road-building dollar spent there. Since the 1920's a "good roads" policy has been traditional with farsighted Carolina Highway Commissioners and staff members who have been alert to the state's needs for better highways through the years.

The many well-equipped contractors in the state have moved ahead quickly with the Interstate projects since the launching of the Federal program in 1956. The Highway Commission gives construction priority in all cases to sections of the Interstate routes where traffic is now greatest; such provision for superior transportation service results in great economic advantages to the areas served. New industry is drawn to locate near the new highways in confidence that controlled access will protect and preserve the permanence of the road location.

Second in the nation in the total number of miles let to contract, according to a recent U. S. Bureau of Public Roads report, the current interstate construction program will provide supply and distribution arteries for the considerable current step-up in North Caro-

NORTH CAROLINA



The Seaboard Air Line Railroad's \$7.5 million "hump" classification yard at Hamlet covers about 600 acres, contains 70 miles of track and can accommodate 5,030 freight cars. It is equipped with the latest electronic devices.



The new Greensboro-High Point Airport terminal building shown here is typical of the modern airport facilities to be found in North Carolina cities and which greatly expedite air travel to and from all points in the state.

lina's industrial development.

These new expressways will provide faster delivery of Carolina products as well as broad avenues to bring an increasing number of tourists into the state; they are expected to be adequate for traffic forecast for the year 1975. Faster delivery, particularly to the Northern Seaboard, the Midwest and the Southeast, will result. Of vast importance to the state's industrial development is the newest link in the Interstate System, linking Charlotte, N. C., and Canton, Ohio, and providing the most direct highway between North Carolina's industrial Piedmont and the Great Lakes region.

Sociologists anticipate that the Interstate System will provide a modern "Main Street" which will link cities and towns more closely together within the state along one long metropolitan strip—a strip which will stretch through the Piedmont Crescent from the Raleigh-Durham-Chapel Hill Research Triangle on the north and east to Charlotte-Gastonia and Greenville-Spartanburg on the south and west.

The greatest potential saving to industry by means of the Interstate Sys-

tem lies in reduced travel time; other savings are also substantial, such as those for insurance and maintenance; and there are fewer accidents on safe roads. "The Wachovia", July, 1958, states that one company showed savings of 28 per cent in travel time, 13 per cent in fuel, 7 per cent in distance and 69 and 68 per cent, respectively, in gear shifts and brake applications. This study compared a recently completed thru-way with a route previously traveled by the company's trucks.

In North Carolina particularly, industry receives a transportation bonus of flexibility in selecting plant sites along the Interstate routes because tracks of the major railroads serving the East and South parallel a great majority of the Interstate System mileage. This provides both considerable flexibility and capacity for the manufacturer to ship his goods.

The main line of six major railroads interlace the state—the Southern, Norfolk Southern, Atlantic Coast Line, Seaboard Air Line, Clinchfield and Norfolk and Western. These and 22 other significant lines have a total of 4,515 miles of track in the state, reaching from the

coast to the mountains and from north to south.

Large modern freight classification yards quickly re-dispatch both carload and less-than-carload traffic at the Southern at Spencer and at the Seaboard at Hamlet.

North Carolina's extensive highway system has greatly aided her industrial development; and one of the most important contributions to her ever expanding progress is the excellent motor carrier system which serves industry from the mountains to the sea. The transportation system in the state conforms largely with the Federal Motor Carrier Act and assures unexcelled motor freight service, not only in intrastate commerce, but throughout every state in the nation.

North Carolina has more long line domiciled interstate carriers than any other state in the nation, with several advantageously situated trucking centers that provide daily trip service and direct motor transportation to market areas embracing more than half of America's population. In the state there are 575 authorized common carriers that own and operate several thousand pieces of equipment.

In addition to these it has more than 60 contract carriers that operate several hundred pieces of equipment. It also has approximately 75 common carriers that transport petroleum products from all existing terminals in the state. All of these groups work closely with industry, delivering equipment and raw materials and transporting finished products to markets throughout the nation.

Every manufacturing plant within the state, therefore, is assured the very best service by motor carriers that are regulated by the North Carolina Utilities Commission. There is no type of traffic that is needed by industry that some carrier operating within the state is not authorized to transport at any time, from and to any place, and under all conditions. The state is proud of its motor freight industry and numbers among its carriers many of the nation's largest operators.

Today, in both large and small centers of mass production that are often only 24 hours away from sources of raw materials and supplies and from their largest markets, manufacturing warehouse facilities are no longer so essential to maintain efficient operating continuity.

Six commercial airlines serve North Carolina—Capital, Delta, Eastern, Na-

tional, Piedmont, and Southern Airways. Piedmont's headquarters are in Winston-Salem. All of the principal cities in the state are close to commercial airports, and many of the smaller towns are served by feeder lines. Small municipal airfields and landing strips are scattered throughout the state.

North Carolina has two modern seaports. One is at Wilmington and the other at Morehead City. They are operated by the N. C. State Ports Authority. There are 20 feeder ports along the Inland Waterway, rivers and sounds that have 12 feet of water and many of these ports are actively engaged in water-borne transportation by barge and small vessels.

The Port of Wilmington is 174 statute miles northeast of Charleston, S. C., and 412 miles south of Norfolk, Virginia. The harbor of the city occupies the entire width of Cape Fear River, and extends south, from a point about one mile north of Hilton Bridge, to about three miles below the south boundary of the city, and 30 miles to the Atlantic Ocean. A depth of 34 feet at mean low water is available across the bar and up the Cape Fear River to Wilmington.

Fifty-eight wharves of various lengths and depths are in operation in Wilmington. New modern fireproof warehouse, fumigating plant and docks costing \$5 million are newly constructed by the N. C. State Ports Authority. Warehouses have railroad and truck service, switching, and ocean terminals with a capacity of about 756,800 square feet. The Port can serve 15 cargo vessels and 200 cars with dispatch via water, rail, and motor freight carriers. Cartage and drayage are also available.

Construction of a \$2 million dock extension is under way at Wilmington.

At Morehead City Port, two large storage warehouses, totaling 88,000 square feet, are equipped with sprinklers and have both railroad and truck service. The wharf, constructed of concrete and steel, is 2,550 feet long with a 34-foot apron and is capable of berthing four 500-foot cargo ships and one petroleum tanker. A depth of 32 feet at mean low water is available. Up-to-date equipment is provided for cargo handling, grain loading, and fumigation.

Continuing inspection and security are a part of the service provided by the State Ports Authority at Wilmington and Morehead City from the moment cargoes are taken over at State Ports until they leave the area. This is a feature much appreciated by shippers.



The port facility at Morehead City has two large storage warehouses totaling 88,000 square feet of space and which have both railroad and truck service. The wharf is 2,550 feet long and is capable of berthing four 500-foot cargo ships and one petroleum tanker.



At Wilmington the huge port offers 58 wharves of various lengths and depths. The warehouses have railroad and truck service, switching, and ocean terminals with a capacity of about 756,800 square feet. The port can serve 15 cargo vessels and 200 cars with dispatch via water, rail, and motor freight carriers.



North Carolina's 70,000-mile state maintained highway system is the largest in the nation. Shown is new construction at the intersection of superhighways U.S. 70 (east-west) and U.S. 29 (north-south) at the Yadkin River at Salisbury. The new U.S. 29 link is shown overpassing both the Southern Railway and U.S. 70.



Like the happy fellow on the opposite page, who is making a fine catch in a North Carolina mountain stream, the millions of persons who live in and visit the state have easy access to a variety vacationland and extensive cultural advantages.

LIVING IN NORTH CAROLINA

There's no commuting problem in North Carolina. Suburbs are only minutes from business districts.

Lakes and fishing streams, even the ocean surf, are not far away from factory and office. There are national and state parks and forests dotted throughout the state.

Golf is played the year around in North Carolina. The Mid-South resorts of Pinehurst and Southern Pines, where there are seven 18-hole courses within a radius of five miles, is a spring and autumn golf capital. The annual North-South Invitational is held at Pinehurst, and the international Ryder Cup matches were played over its famed No. 2 course.

The Mid-South resorts are famed for riding, and are important training centers of horses for race track and show ring. At Southern Pines and Tryon, spring hunt races and horse shows top off the winter training of steeplechasers and hunters, while the more than 300 standardbreds which train at Pinehurst are featured in harness horse race matinees in April. The U. S. Equestrian Team spends part of each winter at Tryon, where Olympic Equestrian Trials were held in 1956.

Sedgeville, a resort with Old English atmosphere, is between the bustling cities of Greensboro and High Point. Here, fox hunting is popular, and commercial hunting preserves with quail and pheasant are gaining favor rapidly in the Piedmont. Hunting throughout North Carolina ranges from wild boar, bear and deer, to small game and waterfowl.

North Carolina has a year around mild climate, moderated by the Gulf Stream off the coast and by a protective

barrier of high mountains on the west. The annual average temperature is 59 degrees, ranging from low of 42 in winter to high of 75 degrees mean in summer. The average annual rainfall is 48 inches.

The well over one million pupils enrolled in North Carolina's schools are taken care of in 3,161 school buildings. Additions to and expansions of the public school system are being made constantly.

It is an important fact that whether the pupil lives in the sparsely populated Outer Banks region on the coast or in the mountain coves of the Great Smokies and Blue Ridge, or in the populous cities, he is guaranteed nine months of school each year.

For education above the high school level, there are 32 fully accredited senior colleges, including the three treated fully in the section on research. Of the 32, 12 are state supported. There are 25 accredited junior colleges in the state and one theological seminary.

North Carolina is known throughout the nation as a medical research center. Within a short distance of each other are North Carolina Baptist Hospital and Bowman Gray School of Medicine at Wake Forest College, North Carolina Memorial Hospital and School of Medicine of the University of North Carolina, and Duke Hospital and Medical School of Duke University.

Each one of the state's 100 counties has public health facilities, and 95 per cent of the state's population has hospitals available in their counties, while the other five per cent has access to the hospitals in adjacent counties.

The State Board of Health in Raleigh governs sanitation in the public interest

throughout the state, including water supplies, public eating places, camps, and so on.

Thus, it may be seen that in all aspects of working and living, North Carolina has very outstanding qualities which are enhanced by an unusually good business climate, a helpful and stable state government, and a citizenry of good workers who are progressive minded.

The site-seeking industrialist will do well to investigate the possibilities here.

Greatly enhancing all the other characteristics that make North Carolina the ideal spot for myriad types of industry are the state's long list of amenities which make for good living.

The industrialist is assured that not only can he and his family get the best in culture, recreation and educational facilities but also that his workers have access to a unique combination of factors to make them happy and healthy.

Variety Vacationland

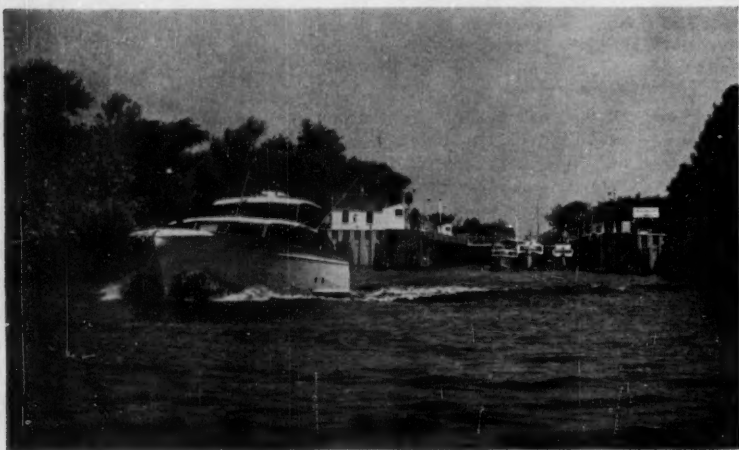
In the Variety Vacationland of North Carolina, on the same day, a vacationist on the coast may be sunning in a swim suit, while another welcomes the warmth of an open fire atop the highest mountains in Eastern America.

North Carolina is a four-season vacationland; there's holiday fun to be had at any time of the year. Colorful festivals, fairs and sports events highlight each season, and many attractions and accommodations remain open year-round.

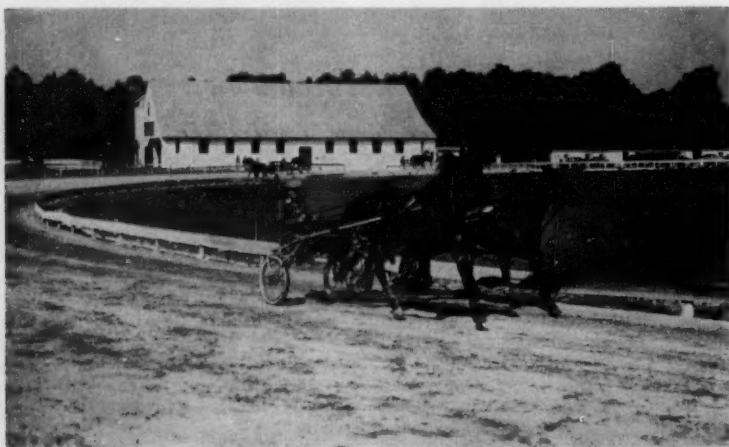
North Carolina is divided into three areas—the mountains, the mid-state Piedmont, and the coastal plain, and the state's geography affords varied



Viewed from the world-famous rhododendron garden atop Rean Mountain is Mount Mitchell, highest peak in the eastern United States. The scene is typical of mountain beauty in western North Carolina.



These are pleasure boats proceeding down the black-watered Pasquotank River near the Inland Water Lock at South Mills, North Carolina.



At Pinehurst, one of the Mid-South horse centers, is this fine trotting track which attracts enthusiasts from many parts of the nation.

climate as well as magnificent scenery. It is more than 500 miles from the westernmost peaks of the Great Smoky Mountains to Cape Hatteras.

On the North Carolina coast, the chain of islands known as the Outer Banks swings out to within 12 miles of the Gulf Stream at Cape Hatteras, where the variety of northern and southern species of fish caught from beaches and boats give the area its title of "Game-fish Junction". Here, big catches are commonplace, and blue marlin and sailfish are specialties.

Saltwater fishing, at its best in spring and autumn, is enjoyed the year around, with no license required. The coastal waters yield more than 30 varieties of game fish.

At the beach resorts, the surf and sun season lasts for almost six months of the year. Larger beaches include Wrightsville and Carolina in the southeast, Atlantic Beach near Morehead City, Beaufort in the middle part of the coast, and Nags Head, with the highest sand dunes along the Atlantic Seaboard, on the Outer Banks.

Now open to motor traffic are the unusual beaches in the Cape Hatteras National Seashore Recreation Area, where there are miles and miles of uncrowded sand. Some wrecks of ancient vessels covered by sand may still be found, and, offshore, submerged wrecks of both ancient and modern ships are prized fishing spots. Nowadays, there are modern accommodations at these once inaccessible beaches.

Moving across into the heart of beautiful North Carolina, one enters the Piedmont Plateau, the heaviest industrial area of one of the South's leading industrial states. But all is not industry here; the Piedmont Plateau boasts famous mid-South golf and riding resorts, the State Capital, the State's largest cities, and historic sites dating back to the beginnings of America. Also, the Piedmont is North Carolina's transportation hub, connecting, with its great highway system, the mountains to the west and the beaches to the east, with its own distinctive attractions to make North Carolina the Variety Vacationland.

In the Piedmont, between the coastal plain and the Blue Ridge Divide, the winter climate is mild, and tempered further by distinctive regions known as the Sandhills and the Thermal Belt. Here Tryon—less than a half hour's drive from leading summer resorts—is a year around resort because of its mild

climate. In the heart of the industrial Piedmont is another year-round resort, Sedgewick, only a few miles away from some of the world's largest textile, cigarette and furniture factories.

Piedmont North Carolina has rich colonial and Civil War history. The battle of Guilford Courthouse was a key engagement of the Revolutionary War, and is one of two Revolutionary War battlefields preserved as National Military parks in the state. The other is at Moores Creek, near Wilmington and the Southeastern beaches.

Modern architecture is prominent in North Carolina, too, due largely to the influence of the excellent school of design at State College. The Coliseum in Charlotte has one of the world's largest aluminum domes. Ice hockey is a regular feature in this vast arena. Another outstanding example of advanced architecture is the State Fair Arena in Raleigh, pioneering the parabolic arch now being adapted to other forms of construction.

The Capitol of North Carolina stands in a wooded square surrounded by state government office buildings in the heart of Raleigh, capital city since 1792. The present Capitol, which replaced an earlier structure in 1833, is a fine example of Greek Revival architecture and a favorite tourist attraction.

North Carolina's mountains, majestic giants against the horizon, are friendly, accessible, and enjoyable in many ways. The Blue Ridge and the Great Smokies are the best known, but there are many other ranges and valleys among them which are criss-crossed with good roads and dotted with comfortable accommodations.

The Southern Appalachians, stretching across Western North Carolina, include the Blue Ridge and Great Smoky ranges, and contain the highest mountain masses in Eastern America. There are 223 peaks 5,000 feet high, or taller, and Mount Mitchell, with an elevation of 6,684 feet, is the tallest peak east of the Mississippi. Even this peak may be climbed by motor car, and there is a State Park at its crest.

The Blue Ridge Parkway, most used of all National Park facilities, is traveled by more than four million people in a year. The Parkway is designed for leisurely driving, and is so safe that one is unaware of altitude, except for the crispness of the air and magnificence of the scenery. Many interesting turn-outs for sightseeing and picnicking are available, and access highways

lead to comfortable accommodations along the route. No commercial traffic is allowed.

"On top of Old Smoky" means the crest of Clingman's Dome, which rises a stately 6,642 feet. An observation tower on the crest surveys the Great Smoky Mountains National Park, which meets the Blue Ridge Parkway in North Carolina, and where 16 peaks top 6,000 feet. A bluish mist frequently hovering over the peaks gives the Smokies their name, and more than 130 species of trees and 1,300 different flowering plant varieties grow here.

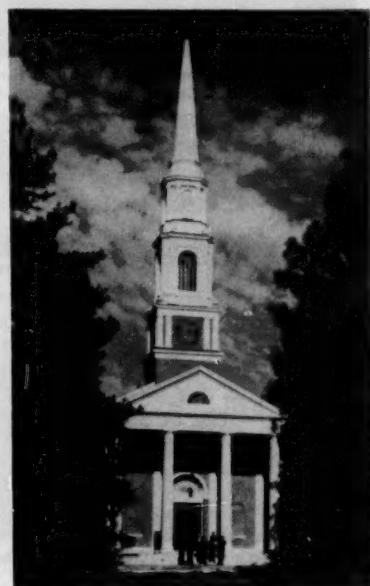
The Great Smoky Mountains National Park has a large wildlife population. There are 52 known fur-bearing species, about 200 species of birds, and 36 kinds of reptiles. Bears wander frequently along highways, making excellent subjects for alert photographers, and deer, foxes, raccoons and bobcats live in the mountains. No hunting is permitted. A complete restoration of a pioneer homestead may be seen near the North Carolina entrance to the Park, and nearby is the Pioneer Museum and the Smokemont ranger station. Modern camp grounds are found in the Smokies, as well as in other North Carolina mountains.

A unique narrow gauge railroad is operated just for vacationists' pleasure near Blowing Rock. Called "Tweetsie" and so-named by the mountain folk when it was a regular railroad with a plaintively melodious whistle, it has tracks, stations, trestles, country stores and picnic grounds all its own. It operates short round trips through the Blue Ridge Mountains from Blowing Rock. High roads include the Blue Ridge Parkway and easily graded State highways that climb the mountains and roll through the valleys.

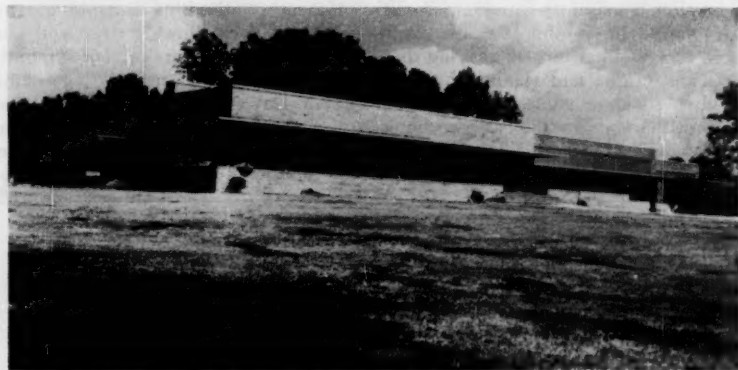
Mount Jefferson is the newest North Carolina State Park. It commands a sweeping view of the mountains just north of the Blue Ridge Parkway several miles after it enters North Carolina from Virginia. It is reached by motor car from Jefferson.

The Blue Ridge Parkway and the Great Smoky Mountains National Park meet near the 50,000-acre Reservation of the Eastern Band of the Cherokee Indians. Called the Qualla Boundary, the reservation is home to almost 4,000 Indians.

Visitors see the Indians at home and on their farms, may visit them in their shops, and enjoy the accommodations



Nowhere in North Carolina need anyone ever be far from the church of his faith.



Myers Park High School at Charlotte is one of the nation's few public schools which have this beautiful campus-type setting. North Carolina is noted for its excellent schools.



Golfing also is a major recreational attraction in North Carolina. Here a golfer prepares to putt on a green at World-famous Pinehurst.



The exclusive Coral Beach Club at Atlantic Beach provides recreation at the surf's edge for executives and their families. Other extensive beach facilities are located all along the state's coastline.

of motels and restaurants operated by Indians. The largest town is Cherokee, a bustling community with many souvenir shops. In autumn the Cherokees hold their annual fair, displaying their arts and crafts, and staging their distinctive stickball games. The Museum of the Cherokee Indian, a store house crowded with treasures of an ancient civilization, is open daily May through October.

Oconaluftee Indian Village at Cherokee, an authentic reproduction of an Indian village of 200 years ago, is the feature of a guided tour. Nearby is Mountainside Theatre, where more than a million people have seen "Unto These Hills", a stirring drama in which the Indians themselves take part.

"Horn In The West", a story of

frontier America in the days of Daniel Boone, is presented in an outdoor amphitheatre in the Blue Ridge Mountains at Boone, near Blowing Rock and Linville. Both dramas are presented nightly except Monday from late June until Labor Day. Other top summer attractions in the mountains include the Brevard Music Festival, which climaxes the annual summer sessions of the

ID AREA SERIES

The accompanying editorial survey of plant location factors in North Carolina was conducted by INDUSTRIAL DEVELOPMENT under the auspices of the North Carolina Department of Conservation and Development. Reprints are available from the Department, State Capitol, Raleigh, North Carolina.

Transylvania Music Camp; the Vagabond Players at Flat Rock, and the Parkway Players at Burnsville.

Pisgah and Nantahala forests in the mountains and Croatan forest on the coast cover 1,107,000 acres, and comprise the administrative unit known as North Carolina National Forests, with headquarters in Asheville.

The attractions of these vast recreational domains range from managed big game hunts to picnicking and sight-seeing from many miles of paved highway criss-crossing them. Pisgah, the largest unit, dips southwest into the waterfalls country and points east to the wild areas around Linville Gorge and Grandfather Mountain. Nantahala National Forest ranges westward to the Great Smokies and Nantahala Gorge, and southeastern to the highlands of North Carolina, where Cullasaja Gorge and Wayah Bald are long-to-be-remembered landmarks.

North Carolina has 11 state parks, ranging from the mountains to the coast. All scenic and representative of the different terrain in the three divisions of the state, they vary in size from 16,828 acres—Pettigrew State Park in the coastal plain which includes Lake Phelps and Somerset Place—to 390 acres at Fort Macon, a beautifully preserved coastal fortification. Most visited park by out of state visitors is Mount Mitchell State Park, where motorists may turn off the Blue Ridge Parkway and drive by hard-surfaced highway almost to the crest of the highest mountain in Eastern America.

North Carolina is a land of summer camps. More than 50 camps are here for boys and girls, many of them drawing campers from all areas of the country. A dozen religious assembly grounds draw large groups, and art colonies and painting classes are popular in mountain and coastal resorts. Instruction in crafts is offered at a number of centers and schools, the majority of which are in the mountains.

There's a wide selection of places to stay while enjoying a Variety Vacationland vacation. Because North Carolina has so many miles (more than 70,000), of good roads, the trend in accommodations building is, of late, toward motels. There are more than 700, large and small, some seasonal, and some in year-round vacation spots. The larger vacation hotels are at the seasonal Mid-South and mountain resorts, while beaches have comfortable hotels open the year round.

Advertising For Progress

The adjacent advertisement and those on the following five pages serve as examples of the kind of effort North Carolina is making in various media to present to prospective industrialists the story of what the state has to offer in the way of attractive plant location factors.

C. Howard Hunt Pen Company plant in Statesville, N. C.



George E. Bartol III,
President of
C. Howard Hunt
Pen Company, Says:

"THEY MEAN BUSINESS IN NORTH CAROLINA"

"When North Carolina modernized its Corporate Tax Structure (effective July 1, 1957), we realized that they mean business in North Carolina."

Like hundreds of other business men, Mr. Bartol admired the business-like leadership that adopted the most modern State Corporate Tax Structure. In cooperation with North Carolina's Plant Location Engineers, the company's consulting engineers pinpointed a plant location that met their specialized requirements. The North Carolina Employment Security Commission took over employee selection by adapting aptitude tests to comply with company standards. There were 7 applications for every job.

"Now in full operation, our new North Carolina facility," says President Bartol, "is producing so efficiently that new advantages to our customers are now made possible."



Vice President and Plant Manager, George Johnson (left), inspects a Boston Pencil sharpener from the C. Howard Hunt production line. "The labor is exceptionally surprising," says Mr. Johnson. "It is high calibre and within our first sixty days some operators were setting new company records."

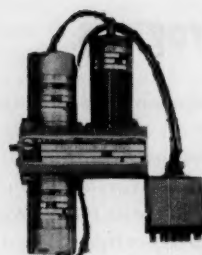
NORTH CAROLINA

If you are seeking prompt and confidential plant location information you are invited to contact William P. Saunders, Director, Department of Conservation and Development, Raleigh, North Carolina.



THE EXPERIENCE OF SPERRY RAND

Another Record of Precision Production in North Carolina



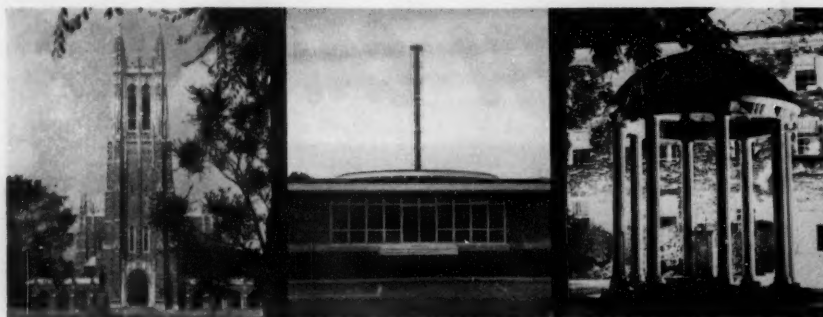
Size 9 motor/tachometer generator with precision gear reduction unit with 6,000 to one ratio. Made in North Carolina.

Skilled North Carolina worker in Sperry Rand's Wright Machinery Company in Durham.

Sperry Rand President Harry F. Vickers says of their subsidiary, Wright Machinery Company, Durham, North Carolina: "These North Carolinians have a proven record of meeting the most exacting requirements as to quality of products, dependability of delivery, and competitive costs. They are accustomed to the ever advancing pace of precision and automation. And I might add this personal observation. Their location in North Carolina's unique Research Triangle is a vital stimulant to the work and family life of their scientific and creative personnel."

North Carolina's unique Research Triangle is comprised of Duke University (left), Durham, N. C.; State College, Raleigh (Atomic Reactor illustrated); and the University of North Carolina (right) in Chapel Hill.

NORTH CAROLINA



If you are seeking prompt and confidential plant location information you are invited to contact William P. Saunders, Director, Department of Conservation and Development, Raleigh, North Carolina.



BEING DOWN ON SOMETHING YOU AIN'T UP ON MAY BE COSTING YOU MONEY

If misconceptions about "slow movin' Southern workers" are delaying your decision to expand operations into the South, let G. Randolph Babcock, President of Pelton & Crane Co., Charlotte, N. C., tell you of his experience. Mr. Babcock moved his dental and surgical equipment manufacturing plant to North Carolina in 1955. He has had ample time to evaluate the industrial South.

"Many people in the North just 'ain't up' on what goes on in the South," says President Babcock. "Some still

believe that Southern workers are slow and easy going. They are wrong and I can prove it!

"Within six months after our Southern work force for Pelton & Crane was hired, it was producing at greater efficiency in North Carolina than we had ever experienced. And the majority of workers are operating machines completely foreign to them . . . I have nothing but the highest praise for North Carolina workers. They learn rapidly, appreciate their jobs and are anxious to give a day's work for a day's pay."

NORTH CAROLINA

For prompt and confidential plant location information you are invited to contact William P. Saunders, Director, Department of Conservation and Development in Raleigh.

The arithmetic of economics and an enlightened reforestation program



tipped the scales for

NORTH CAROLINA

Kenneth C. Towe, president of American Cyanamid, spells out the 'arithmetic' that guided his realistic engineers in locating the new flakeboard plant of Cyanamid's Formica Division — Cyanamid's third expansion in North Carolina:



"Governmental Climate" cited by K. C. Towe (left), President of American Cyanamid, is demonstrated in discussions with North Carolina's businessman Governor Luther H. Hodges (holding piece of flakeboard). "Governor Hodges talks our language," say industrial leaders.

Availability of intelligent,
quickly trainable personnel . . .
accessibility to raw materials,
markets, and transportation . . .
community enthusiasm and
governmental climate.

Active and planned conservation of natural resources has become a keynote to industrial opportunity in North Carolina. A well trained staff of development engineers await the challenge of selecting for you the right location to suit your individual requirements. Write or wire for a copy of "Industrial Location Factors" to William P. Saunders, Director Department of Conservation and Development, Raleigh 4,

NORTH CAROLINA

Year'Round Mid-South

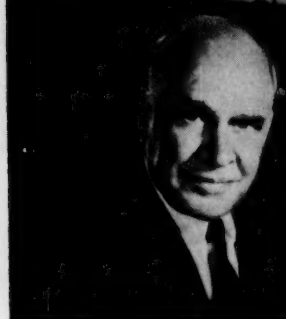


makes

NORTH CAROLINA

**"the outdoor
lighting center
of the world"**

At its quarter-million square-foot plant in Hendersonville, North Carolina, General Electric manufactures outdoor lighting equipment for world-wide distribution. "We needed a location close to raw materials and the lighting market," says General Manager Joseph T. Bailey, "and Hendersonville offered us all the factors of a good business climate."



General Electric's outdoor lighting equipment center is one of the many new plants thriving in North Carolina under the good business climate encouraged by Business Man Governor Luther H. Hodges.

For more information about North Carolina, communicate with Wm. P. Saunders, Director, Department of Conservation and Development, Raleigh 4, North Carolina.

"INDUSTRY SUCCEEDS IN NORTH CAROLINA"

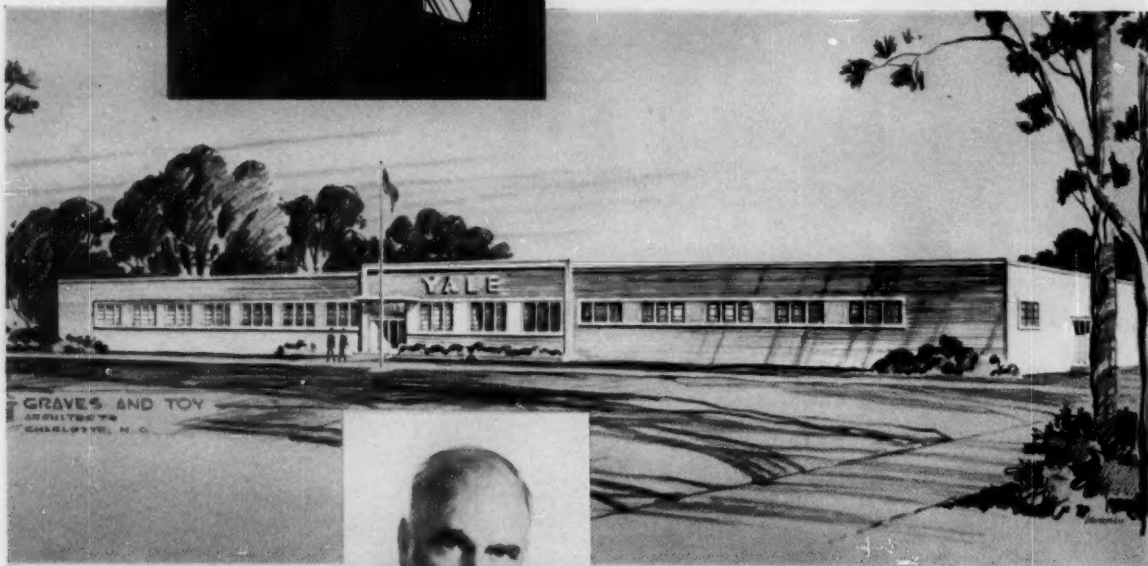
RECORD OF SUCCESS CONVINCES YALE & TOWNE

For the site of its seventeenth plant, Yale & Towne checked every state, town by town. North Carolina scored on every point:

Nearness to markets . . . modern transportation by land, sea, and air . . . intelligent personnel . . . climate for low-cost production and year-round outdoor living . . . cooperative government and communities.

A year after choosing a North Carolina site, Yale & Towne officials are high in its praise: "In North Carolina, we found the kind of place and the kind of people that make for success," says Yale & Towne Vice President Leo J. Pantas, General Manager of the Yale Lock and Hardware Division, which now has a new plant at Monroe, N. C. "We know people help industry to succeed. Monroe folks gave us a warm welcome. They think straight, talk straight. To them a job is an opportunity."

Monroe is just one of scores of North Carolina towns where industry thrives among green fields and friendly people. North Carolina development engineers will help custom-plan your expansion site. Write or wire Wm. P. Saunders, Director, Dept. of Conservation and Development, Raleigh 4, North Carolina.



Business Man Governor
Luther H. Hodges
whose dynamic leadership
has brought about
tax reductions put into
effect July 1, 1957.



NORTH CAROLINA

Year Round Mid-South

manufacturers record

THE NATIONAL MAGAZINE OF PLANT LOCATION NEWS

EXPANSION BRIEFS

CRESTLINE, OHIO. Plans for construction of a multimillion-dollar glass fabricating plant here have been announced by Pittsburgh Plate Glass Company. To be on a 49-acre site, the plant will have 275,000 square feet of floor space. About 250 to 275 hourly workers will be employed at the plant which is designed principally for the fabrication of tempered glass. Completion of the project is scheduled for sometime in 1959.

JACKSONVILLE. A \$2 million chemical plant for the production of synthetic laevo-menthol will be built in this Florida city by The Glidden Company. To be incorporated as part of the company's operations here, the new facility will be of sufficient size to supply approximately 40 per cent of the nation's requirements for this important flavoring commodity.

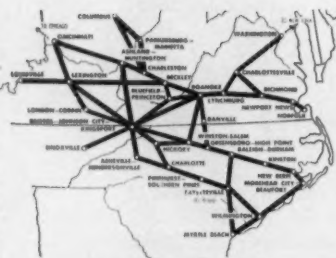
CHICAGO. Construction is underway at the South Works here of United States Steel Corporation on a new blooming and structural mill. The ultra-modern facility will produce standard structural and wide flange beams of the lighter weights which are in great demand by industry.

LIME KILN, MD. The new multimillion-dollar cement plant of Alpha Portland Cement Company has been officially opened here. In full production the plant will have a capacity of 2,250,000 barrels of cement a year. There are approximately 140 persons employed, with a total payroll of close to \$750,000 annually. The plant is described as being the nearest thing in the cement industry to push button operation.

BUTLER, PA. Ground has just been broken here for a new plant for Armco Steel Corporation on Air Reduction Sales Company Property here. The latter will operate the facility. The new installation will have a production capacity of 120 tons a day of high purity oxygen. Completion of the project is expected within 18 months.

TRAVELING is a PLEASURE on PIEDMONT

Providing **FAST,
CONVENIENT**
Flight Service
BETWEEN THE
ATLANTIC
AND THE
MIDWEST



FOR RESERVATIONS
Call Your Nearest
Piedmont Airlines office
or see your Travel Agent

PIEDMONT
Airlines

EXPANSION BRIEFS

PITTSFIELD, MASS. During the next five years the General Electric Company will spend \$47 million to modernize its plants here. A major portion of the modernization funds will go to improve power transformer manufacturing facilities, with smaller investments being made in the distribution transformer and ordnance plants.

AIKEN, S. C. Construction will begin the latter part of this year on the Heavy Water Components Test Reactor at the Savannah River Plant of the U. S. Atomic Energy Commission. Of the \$8 million allocated for the project, approximately \$6.4 million will be for construction and purchase of equipment and materials. The experimental reactor will assist the du Pont Company to answer numerous questions that will arise in a developmental study undertaken for the AEC by du Pont to determine the feasibility and economics of heavy-water moderated reactors for electric power generation.

DANVILLE, ILL. Lift trucks are now coming off the assembly line of the recently completed plant here of Hyster Company. The new facility is on a 55-acre tract and is described as the most modern in the industrial truck industry. The building is 200 by 500 feet in size and is the first of three wings to be built.

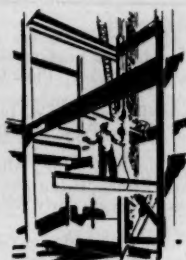
MUNCIE, IND. Westinghouse Electric Corporation will build here a multimillion-dollar power transformer plant. The new installation will add to the capacity of the Transformer Division's main plant at Sharon for the manufacture of large power transformers. It is expected that the plant will be in operation by late 1961 or early 1962, and it will employ more than 2,000 workers.

LOS ANGELES. Plans have been announced for the construction here of a new multimillion-dollar steel rolling mill by Soule Steel Company. The facility will be on a 22-acre tract in the Dominguez industrial area and will be built for a rated capacity of 36,000 tons of billet-sized ingots a year.

FAYETTEVILLE, ARK. The Standard Register Company has just formally opened its new manufacturing plant here. The unit is producing marginally punched, continuous business forms and unit-type Zipsets. Future expansion is contemplated which will turn the Fayetteville facility into a fully integrated production unit within the next few years. The present new building has 95,800 square feet of floor space and is on a 38-acre tract.

MOORESTOWN, N. J. A new plant to be occupied by the Delta Star Electric Division of H. K. Porter Company will be erected here. To cost more than \$500,000, the new plant will make a variety of electrical parts. It is expected that the facility will employ between 350 and 500 persons. It will be located on a tract of 30 acres.

SAN LEANDRO, CALIF. Montgomery Ward & Company will build a new paint plant here. The structure will have 595,000 square feet of floor space and will be on a 43-acre tract.



NEW PLANT SUMMARY

BY JOSIE QUILTY

The following is a summary of major industrial plants reported to **INDUSTRIAL DEVELOPMENT** during the month of August, 1958, by industries and industrial development organizations in the United States, Canada, and territories.

Number of employees is indicated by the code: A (under 25); B (25-100); C (100-250); D (250-1,000); and E (Over 1,000).

ALABAMA

Clanton—Newport Business Forms, Inc., business forms. \$200,000. (C)

Huntsboro—Tri-State Sand Co., industrial sand. \$250,000. (B)

Ketona—Ketona Chemical Corp., Philip H. Neal, Pres., prilled ammonium nitrate, ammonium nitrate-limestone. Owned by Alabama By-Products and Hercules Powder Co. Oper. est. to begin early, 1959.

Madison—Madison Plywood Co., desks, tables. \$750,000. (C)

Sayerton—Alabama Gas Corp., R. A. Puryear, Jr., Pres., gas from propane. Oper. est. to begin Nov., 1958. \$1.2 million.

ALASKA

No plants reported.

ARIZONA

Gilbert—C. P. S. of Arizona, 101 Main St., Tom Peek, Off., baby shoes, men's slacks, western wear. Oper. est. to begin Fall, 1958. (B)

Phoenix—Mech-Tronics Corp., S. M. DeMuro, Pres., plant planned. Home office: Melrose Park, Ill. (C)

Tucson—Baum & Adamson Tire Co., S. Campbell Ave., Harold Adamson, Jr., Off., tire recapping and truck service. Oper. est. to begin Oct., 1958.

ARKANSAS

Conway—Macray Chemical Co., laboratory and mfg. plant planned.

Hope—Cameron Feed Mills, Inc., G. Ted Cameron, Pres., bulk feed mill. Oper. est. to begin late, 1958. \$300,000.

McGehee—Concrete Industries, Inc., George B. Ewing, Off., pre-stressed and pre-cast concrete. In oper.

North Little Rock—Southwest Plating and Mfg. Co., U. S. Hwy. 67-E and Bethany Rd., Stanley Pawlak, Pres., industrial plating, die casting, machine parts and refinishing auto bumpers and grills. Ltd. oper. began Sept., 1958. (C)

Paragould—Wonder State Mfg. Co., Wm. L. Gatz, Jr., Off., all steel prefabricated houses. In oper.

Perryville—Kimbrough Mfg., Inc., W. L. Kimbrough, Off., fishing novelties. In oper.

Pine Bluff Arsenal—Arkansas Louisiana Chemical Corp., W. R. Stephens, Pres., chlorine and caustic soda. (B)

Rogers—Northwest Arkansas Packing Co., Marvin Fairchild, Mgr., meat packing plant. Oper. began Sept., 1958.

CALIFORNIA

Bassett—Valley Furniture Mfg. Co., 13074 E. Valley Blvd., Tommy Santa, Pres., custom made furniture. In oper.

Buena Park—Hughes Aircraft Co., Artesia St., plant planned. 80,000 sq. ft.

Campbell—International Business Machines,

Parr Ave. and Winchester Rd., W. B. McWhirter, Gen. Mgr., has optioned 30 acre site for new IBM card mfg. plant to replace San Jose facility. 60,000 sq. ft.

Chatsworth—Ramo-Wooldridge Corp., Gen. H. L. George, Vice Pres., electronic research and development center. Under const. (E)

Corona—Libby-Owens-Ford Glass Fibers Co., Magnolia Ave., R. H. Barnard, Pres., glass fiber mfg. and fabrication, warehousing. Under const. 105,000 sq. ft. \$1 million plus. (D)

Culver City—Litton Industries, 10916 Washington Blvd., Charles B. Thornton, Pres., electronics laboratory. In oper.

Fullerton—American Missile Products, 1225 E. Ash, Ruben H. Hundley, Pres., telemetering units, electronic equip. In oper. (B)

Fullerton—Steelcase, Inc., 2301 W. Commonwealth Ave., Edgar W. Anderson, Mgr., office furniture. Home office: Grand Rapids. In oper. (B)

Gilroy—Stubnitz-Greene Corp., Gilroy Gymkhana Grounds, Lewis Stern, Vice Pres., steel springs for auto seats. Home office: Adrian, Mich. Const. began Sept., 1958. (C)

Glendale—All State Balloon Co., 3639 San Fernando Rd., Bert Korey, Owner, advertisement balloons.

Goleta Valley—Dispensers, Inc., 400 Rutherford St., Maurice Goldman, Pres., plastic and metal food containers. Oper. est. to begin early, 1959. 22,000 sq. ft.

Goleta Valley—Neal Feay Co., 133 La Paterna Ave., N. F. Rasmussen, Pres., flight computers for jet planes, hardware components. Oper. est. to begin early, 1959. (B)

Hercules—Hercules Powder Co., nitrogen tetroxide pilot plant. Oper. est. to begin late, 1958.

La Habra—Standard Oil of Calif., Western Operations, Hwy. 39 and Imperial, W. C. Bemis, Supt., Southern Division new plant. In oper. 41,000 sq. ft. (C)

Los Angeles—Louis Allis Co., 4405 E. Olympic Blvd., district office bldg. and warehouse. Home office: Milwaukee. In oper.

Los Angeles 36—Blue Danube Knitwear, 3613 W. Third St., Andrew Eros, Owner, woolen skirts, sweaters, dresses and coats. In oper.

Los Angeles—Chemetron Corp., National Cylinder Gas Div., J. L. Adank, Div. Pres., liquid oxygen, nitrogen, argon. Oper. est. to begin early, 1959. \$1.75 million.

Los Angeles—Genesys Corp., 10131 National Blvd., Geoffrey Post, Vice Pres., advanced control computer systems. Subs. of Chance Vought Aircraft, Inc. In oper. 10,000 sq. ft.

Los Angeles—Signal Oil and Gas Co., R. H. Green, Pres., office bldg. Oper. est. to begin early, 1960. 200,000 sq. ft. \$5 million.

Los Angeles—Soule Steel Co., Dominguez Ind. Area, Edward Lee Soule, Jr., Pres.,

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NEW PLANTS

steel rolling mill. Oper. est. to begin Fall, 1959.

Martell—Winton Lumber Co., Jack Rush-ton, Mgr., plywood processing. Oper. est. to begin summer, 1959.

Oakland—General Dynamics Corp., Liquid Carbonic Div., Frank L. Pace, Jr., Pres., liq-uid nitrogen, oxygen, argon. In oper.

Palo Alto—Pacific Telephone & Telegraph Co., 345 Hamilton Ave., bldg. planned. 58,000 sq. ft. \$3.25 million.

Pomona—Consolidated Rock Products, 132 N. Pomona, cement mixing plant planned. Home office: Los Angeles.

Richmond—Stauffer Chemical Co., semi-works plant, tantalum and columbium penta-chlorides. Under const. \$300,000.

Sacramento—National Biscuit Co., 1205 Arden Way, sales and distribution center. In oper. 20,000 sq. ft. (B)

San Jose—Glaser Enterprises, Inc., 414 Queen's Lane, engineering and production services hdqrs. In oper. (C)

San Leandro—Montgomery Ward & Co., Alvarado St., E. E. Peterson, Regional Gen. Mgr., distribution center warehouse, paint factory. Oper. est. to begin Spring, 1959. 595,000 sq. ft. \$Multi-million. (D)

San Ramon—Aerojet-General Nucleonics, Robert Mainhardt, Gen. Mgr.; nuclear reaction production, engineering, office, lab, shop. Div. of Aerojet-General Corp. Under const. 42,000 sq. ft. (C)

Santa Ana—Voit Rubber Corp., Seger-strom Ind. Dist., Harbor Blvd. and Hunt-zinger Ave., Willard D. Voit, Pres., tread rub-ber and tube repair materials. Oper. est. to begin July, 1959. 60,000 sq. ft. \$2 million.

Sunnyvale—Lockheed Aircraft Corp., Mis-sile Systems Div., facility planned for re-search and development of the U. S. Air Force's reconnaissance satellite, "Pied Piper." 346,000 sq. ft. \$8 million.

West Sacramento—Ideal Cement Co., ce-ment distribution and packaging terminal. In oper. \$2.5 million.

COLORADO

Denver—Power Equipment Co., E. 62nd Ave., William J. Faulkner, Pres., heavy ma-chinery. Under const. 24,000 sq. ft. \$500,000.

Grand Junction—Walter R. Hall, Fruita Hwy., distribution and transportation. Under const. (B)

Drake—Estes Park Beryllium Corp., beryl ore processing mill planned.

Loveland—Scientific Radio Products, Inc., E. M. Shideler, Pres., component parts. Moved from Omaha. In oper. \$200,000. (B)

CONNECTICUT

Bridgeport—Valve Corp. of America, Inc., new sales, technical and service depts. In oper.

Danielson—Knox Glass Co. Inc., Dr. Ar-thur W. Wishart, Pres. Oper. began Sept., 1958.

New Britain—Stanley Steel Strapping, Div. of Stanley Works. In oper. \$2 million plus.

New Haven—Hoover Co., H. W. Hoover, Jr., Pres., appliances. Oper. est. to begin summer, 1959. \$2 million.

New Milford—Scovil Mfg. Co., Boardman Dist., Patrick F. Moran, Off., copper and brass tubing. Moved from Waterbury, Conn. Oper. est. to begin Fall, 1958. \$5 million. (D)

Stamford—Pitney-Bowes, Inc., postage me-ters, business machines. Oper. est. to begin April, 1959. 260,000 sq. ft. \$6.7 million. (E)

Stonington—Insta-Mold Plastics Corp., plastics. In oper.

Stratford—Sikorsky Aircraft Co., employ-ment, photography, production control, engi-neering and service depts. moving from Bridgeport. Oper. est. to begin Oct., 1958. 500,000 sq. ft.

Waterbury—Curtis Products Co., Sharon Rd., Cly-Dei Ind. Park, Richard M. Curtis, Pres., screw machine parts. Const. began Aug., 1958. 10,000 sq. ft. (B)

DELAWARE

Port Mahon—McWood Co. Tank Farm, Charles Martin, Mgr., tank farm and pipe line transport. In oper. \$1 million. (B)

West Seaford—Southern States Cooper-ative Seed And Farm Supply Warehouse, Jack McHugh, Mgr., seed and farm supplies. In oper. \$750,000. (B)

DISTRICT OF COLUMBIA

No plants reported.

FLORIDA

Clearwater—Hood's Milk, Inc., Clearwater Ind. Park, Calumet and Sunshine Dr., Paul Hood, Pres., milk storage facilities, shipping offices. Under const. (B)

Clearwater—Wright and McLaughlin As-sociates, Pine Forest Ind. Park, E. Bay Dr., Thomas W. Wright, Co-owner, plastic, wood and metal items. Subs. of Ace Wood Turn-ers. Has purchased site.

Hialeah—Averill, Inc., 6800 NW 37th Ct., Richard Hillstead, Pres., industrial packag-ers. Oper. est. to begin late, 1958.

Hialeah—United Tool & Die Corp., Bob Wise, Pres., tools, dies, new hdqrs. Oper. be-gan Sept., 1958.

Jacksonville—Glidden Co., Organic Chem-ical Div., Dr. W. David Stallcup, Vice Pres., synthetic laevo-menthol plant planned. \$2 million.

Jacksonville—Winn-Dixie Stores, Inc., Edgewood Ct., B. L. Thomas, Vice Pres., coffee processing. Oper. est. to begin Jan., 1959. 30,000 sq. ft. \$250,000.

Live Oak—Green Furniture Co., Oscar Green, Owner, furniture. In oper. (B)

Miami—Lady Fair Bakery, Southern Div., Russell Knepp, Off., baked goods. Oper. est. to begin Dec., 1958. \$1.5 million. (B)

Miami—Pearce-Simpson, Inc., factory and office bldg., radio-telephones, mobile commu-nication systems. Under const. 20,000 sq. ft.

North Miami—Stanley Building Special-ties Co., Bennett Ind. Area, glass grinding plant. In oper.

Russell—Florida Solite Co., John W. Rob-erts, Pres., concrete aggregate. Oper. est. to begin March, 1959. (B)

Sarasota—Coca-Cola Co., Lime Ave., Mor-ris Boyd, Mgr., bottling plant. Under const.

GEORGIA

Atlanta—Custom-Aire Div., Pacific Indus-tries, dist. center for gas engines. In oper.

Atlanta—Delta Air Lines, Atlanta Airport, State Rte. 85, C. E. Woolman, Pres., jet over-haul base. Full oper. est. to begin 1960. 356,320 sq. ft. \$10 million. (E)

Atlanta—Memphis Can Co., paper con-tainers. In oper.

Atlanta—Peavy Construction Co., con-crete products. In oper.

Augusta—Augusta Mill Supply Co., De-Laigle Ave., steel supply. Under const. 25,460 sq. ft. \$250,000.

Blairsville—Arbor Acres Farm of Ga., breeder poultry. Home office: Gastonbury, Conn. Under const. \$250,000.

Blairsville—Mountain Poultry Co., feed mill. In oper.

Carrollton—E. F. Houghton & Co. has ac-quired 5 acre site for plant to produce oils, chemicals, packings. Home office: Philadel-phia.

Cartersville—Cartersville Casting Co., Inc., Cassville Rd., John M. Baker, Pres., machine shop, office. In oper.

Columbus—Liberty Coach Co., Inc., Allen Spencer, Pres., mobile homes. Home office: Bremen, Ind. Oper. est. to begin early, 1959. \$400,000 plus. (D)

Macon—Blanton Smith Hatcheries of Ga., Inc., Hal Murray, Mgr., poultry. In oper.

Marietta—McPhran Corp., Cobb-Marietta Ind. Park, D. I. McCool, Pres., plastic con-struction materials. Moving from Atlanta. Under const.

Mt. Vernon—Standard Garments, Inc., sewing plant. In oper.

Quitman—Southern Planters, Inc., C. A. Strickland, Pres., canning plant. In oper. (B)

Statesboro—Standard Garments, Inc., ap-parel cutting-finishing plant planned. 40,000 sq. ft.

Wadley—Standard Garments, Inc., sewing plant. In oper.

West Point—West Point Foundry and Ma-chine Co., Harold Mayberry, Supt. Div. of Batson-Cook Corp., In oper. 17,000 sq. ft.

HAWAII

No plants reported.

IDAHO

Florence—Idaho Mining and Milling Co., Philip W. Jungert, Pres., peat processing. In oper.

Nampa—Albertson's Hatchery and Feed Mill Co., William Shannon, Supt., chicken and turkey hatchery; fowl feed mill. Under const.

ILLINOIS

Addison—Hauserman Die and Machine Co., molds, dies, similar products. In oper.

Arlington Heights—All Weather Steel Products, Inc., Centex Ind. Dist., steel fabri-cation. Moving from Des Plaines. 20,000 sq. ft. plant under const.

Bellwood—Sleepeck Helman Printing Co., 25th and Maywood, printing. In oper. 100,000 sq. ft. \$1 million.

Brookfield—Great Western Sugar Co., Congress Park, sugar processing plant planned. Home office: Denver. \$800,000. (A)

Chicago—Hersey Mfg. Co., 4935 W. Bel-mont, water meters, sales, warehouse, ship-ping. Home office: Dedham. In oper.

Chicago—Standard Oil Co. of Indiana, Touhy Ave. and Elmhurst Rd., petroleum products terminal, storage and offices. Oper. est. to begin 1959.

Danville—Hyster Co., Philip S. Hill, Vice Pres.; shipping, handling, storage, assembly line. Home office: Portland, Oreg. First of 3 wings in oper.

Fairfield—Fairfield Foundry Co., Inc., Tony Chapman, Mgr., foundry. In oper. (B)

Galesburg—Butler Mfg. Co., Arvid A. Schoning, Mgr., pre-engineered metal bldgs. Oper. est. to begin Jan., 1959. 125,000 sq. ft. \$1 million.

McCook—Armour & Co., Chemical Div., ethoxylation plant. Oper. began Sept., 1958.

North Brook—Deublin Co., swivel joints. Moving from Glenview. In oper.

Riverside—Great Western Sugar Co., 9500 Southview Ave., sugar refinery. Oper. est. to begin Spring, 1959. 40,000 sq. ft. \$800,000.

Skokie—National Minerals & Chemi-cal Corp., mineral processing and research center. Oper. est. to begin 1958. 187,046 sq. ft. \$5 million. (D)

NEW PLANTS

INDIANA

Ft. Wayne—Peter Eckrich Sons, meat packing.

Ft. Wayne—Ft. Wayne Wastepaper Co. Greensburg—Delta Faucet Div., Masco Screw Products Div. \$200,000. (C)

Jeffersonville—American Concrete Co., Ind. 131 and U. S. 31-E, G. Douglas Hill, Supt., ready-mix concrete. Home office: Louisville. In oper. (B)

Union City—Mengel Co., R. B. Blackiston, Gen. Mgr., cabinet warehouse. Oper. est. to begin Nov., 1958.

Warsaw—R. R. Donnelly and Sons Co., U. S. Hwy. 30, printing plant, rotogravure process and bindery. Home office: Chicago. Oper. est. Aug., 1959. 53,000 sq. ft. \$6 million.

IOWA

Cedar Rapids—Collins Radio Co., radio communication and air navigational equip. New mfg. plant planned.

Cresco—Davidson's Modern Gas Service, Robert D. Davidson, Pres., liquified gas plant. Oper. est. to begin Fall, 1958.

Des Moines—Midwest Dinettes, Inc., 1934 E. University Ave. Subs. of Gate City Table Co., Atlanta. Oper. est. to begin Fall, 1958. (D)

Iowa City—Victor Industries Corp., Hwy. 6, collapsible tubs, aluminum cans, plastic products. 50,000 sq. ft. \$500,000. (C)

Sperry—United States Gypsum Co., C. H. Shaver, Off., gypsum mfg. plant. Oper. est. to begin early 1960.

KANSAS

Chanute—Forney Arc Welders, Inc., Southeast Kansas Div., 114 W. Main, Frank Riley, Mgr., electrical arc welders and supplies. Oper. began Sept., 1958.

Chanute—Kansas Boats, 202 S. Evergreen, Walter L. Ramey, Pres., fiberglass boats. Div. of Glass Specialties Engineering and Mfg. Oper. began Sept., 1958.

Kansas City—H. B. Fuller Co., 150 Funston Rd., George Ryberg, Mgr., paste, glue, resin products. In oper. (B)

Kansas City—K. C. Abrasives Co., 3101 Perry Ave., Harry L. Borden, Off., industrial abrasives. In oper.

Kansas City—Kellogg Switchboard & Supply, 7th and Sunshine, D. W. Linde, Off., communication equip. In oper. (B)

Kansas City—Monatco Mfg. Co., Fairfax Ind. Dist., Front and Waverly, J. L. Fizzell, Pres., mobile firefighting equip., hydraulic equip. Oper. began Sept., 1958. 16,000 sq. ft. (B)

Kansas City—Sealright-Oswego Falls Corp. Fairfax Ind. Dist., paper containers warehouse. Oper. est. to begin Nov., 1958. \$500,000.

Marysville—Villa Mobile Homes Mfg. Co., house trailers. Home office: Camden, Ark. In oper. (B)

McPherson—Modern Products, Inc., L. R. Beard, Pres., aluminum screens, new factory. Oper. began Sept., 1958.

Mound City—Associated Research Products Co., T. G. Doty, Pres., fiberglass burial vaults, office partitions and furniture. Home office: Kansas City.

Wichita—Sante Fe Trail Transportation Co., Santa Fe Bldg., truck line. In oper. 53,000 sq. ft.

KENTUCKY

Benham—Wisconsin Steel Div., International Harvester Co., metallurgical coal. Oper. est. to begin early 1959.



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NEW PLANTS

LaGrange—Shield Mfg. Co., Ballardsville Rd., quilted mattress protector pads, infant pads, furniture pads. In oper.

Lexington—P. Lorillard Co. has purchased 16 tobacco storage warehouses. 500,000 sq. ft. \$750,000.

Nicholasville—Irrving Air Chute Co., W. Oak St., Charles H. Pulley, Vice Pres., coated fabrics. In oper. (B)

Owensboro—O. M. & C. Co., hot mix asphalt. \$125,000. (B)

Tateville—JETCO, floor sweeping compounds. Home office: Trotwood, O. In oper.

LOUISIANA

Baton Rouge—Copolymer Corp., A. K. Walton, Pres., facilities planned for production of a new dry rubber product. \$3 million.

New Orleans—American Chemical Co. of La., Inc., 3850 Veterans Memorial Hwy., Joseph Lassen, Pres., chemical specialties, cleaning compounds, floor waxes, detergents. Oper. est. to begin Oct. 1958. 12,000 sq. ft. \$250,000.

MAINE

Lewiston—Benson & Sullivan Co., Inc., 1531 Lisbon St., confectionaries, toys, tobacco, paper goods. Oper. est. late 1958. 12,000 sq. ft.

Lincoln—Eastern Corp., Derek G. Currie, Vice Pres., bleached sulphate pulp. In oper. \$11 million.

Sanford—Alloy Products Co., jet aircraft parts. Moving from Marion, Ind. (D)

Sanford—Hamlin Furniture Co., dining and occasional chairs. Moved from Limerick, Maine. In oper.

MARYLAND

Lime Kiln—Alpha Portland Cement Co., R. S. Gerstell, Pres., cement plant. Oper. began Sept., 1958. \$Multi-million.

Washington County—U. S. Steel Corp., Michigan Limestone Div. has purchased 1,400 acres.

MASSACHUSETTS

Agawam—H. P. Hood & Sons, Main St., milk plant, consolidation of oper. Const. est. to begin Spring, 1959.

Belmont—Weston Biscuit Co., William Cozine, Off., crackers and cookies. Oper. est. to begin Dec., 1958. 12,000 sq. ft.

Boston—Canteen Co., Waltham Ind. Center, Paul Lunt, Mgr., repair dept., commissary, sales and administration offices. Subs. of Automatic Canteen Co. of America. Has purchased site. 14,000 sq. ft.

MICHIGAN

Detroit—Arkos Mfg. Co., 20570 W. 8 Mile Rd., Arnold A. Kosarin, Pres., direct-fired oil and gas heaters. In oper. (D)

Detroit—Chrysler Corp., Imperial Div., Clare E. Briggs, Vice Pres., automobiles. In oper. 1 million sq. ft. (E)

Detroit—Commercial Carriers, Inc., car carriers plant planned. \$1 million.

Detroit—Detroit Harvester Corp., J. T. Smith, Pres., shopping center planned. \$500,000.

Detroit—International Business Machines Corp., Thomas J. Watson, Jr., Pres., office. In oper. 100,000 sq. ft.

Farmington—McLaughlin Co., F. L. McLaughlin, Pres., fasteners, weld nuts and clips for auto industry plant planned. \$110,000. (B)

Grand Rapids—Associated Truck Lines, Inc., Robert McGregor, Off., common carriers plant planned. \$600,000.

Grand Rapids—Lear, Inc., J. Benecchi,

Vice Pres., mfg. plant and office. Under const. \$2.5 million.

Green Oak Twpsh.—Haigh Mfg. Co., U. S. Hwy. 23, Henry A. Haigh, Pres., automobile stampings, assembly work. Under const. 12,000 sq. ft. (B)

Jackson—Tomkins Johnson Co., A. R. Johnson, Pres., mfg. plant. Under const. 111,280 sq. ft. (C)

Utica—National Machine Products Co., M. A. Chambers, Pres., warehouse and shipping dock. Under const. \$500,000.

Warren—Essex Brass Corp., J. Q. Naeel, Pres., brass lubricating parts for machine tools and pumps. Under const.

Ypsilanti—Peninsular Paper Co., D. T. Quirk, Pres., warehouse and mfg. plant. Under const. \$349,337.

MINNESOTA

Buffalo—Wonderalls of Minnesota, George J. Rosenberg, Pres., children's play clothes and sportswear. Oper. est. to begin Spring 1959. 30,000 sq. ft. \$200,000.

Golden Valley—Pako Corp., Harry Dye, Pres. Move planned from Minneapolis. 200,000 sq. ft.

Montgomery—Munsingwear, Inc., G. D. McConnell, Pres., apparel factory planned. 22,000 sq. ft.

Pine Bend—North Central Chemicals, Inc., Robert Campbell, Pres., sulphuric acid. Oper. est. to begin summer, 1959. \$2 million. (B)

Stillwater—Ammerman Co., Inc., C. L. Ammerman, Pres., commercial and industrial ventilating machines. Under const.

MISSISSIPPI

Greenville—Babe-Eze Toys, Inc., Washington Ave., O. D. Kincaid, Pres., infant's plastic toys. Moving from San Antonio. Oper. est. to begin late 1958. 13,000 sq. ft. (C)

Greenwood—Greenwood Mfg. Co., wooden picture frames. Oper. est. to begin early 1959. \$200,000. (B)

Jones County—South Mississippi Electric Power Assn., generating plant. \$12 million. Under const.

Lambert—Lambert Mfg. Co., apparel. Oper. est. to begin Nov. 1958.

Lucedale—Bach Mfg. Co., Alfred Bach, Off., apparel. \$125,000. (B)

MISSOURI

Arcadia Valley—Tools and Machinery Builders, Inc., special machinery for fiber can industry. In oper.

Aurora—Moreland-Hipp, poultry processing plant. Under const. (B)

Cameron—Cameron Wood Products Co., wood. In oper. (B)

Columbia—Missouri Utilities Co., air-gas mixing plant. Oper. est. to begin late 1958.

Desloge—French Woodworking Mfg. Co., furniture frames. In oper. (B)

Excelsior Springs—Avsco Co., Inc., Jack Ferguson, Pres., plastics research and development. Under const.

Kansas City—Alton Box Board Co., Container Div. In oper. 70,000 sq. ft.

Kansas City—Automatic Distributors, Inc., warehouse and office planned. 60,000 sq. ft.

Kansas City—Bosch Embroidery Co. In oper. 13,000 sq. ft.

Kansas City—Kirsch Co., warehousing. Home office: Sturris, Mich. In oper.

Kansas City—Pitman Equipment Co. In oper. 36,000 sq. ft.

Kansas City—Lazy Boy Lawn Mower Co., mfg. plant and hdqrs. planned. 26,000 sq. ft.

Monett—Efco Corp., Terry Fuldner, Pres. Under const.

North Kansas City—Sinclair & Valentine Co., printing inks, allied products. In oper. 24,000 sq. ft.

Pacific—Calsi-Crete, Inc. In oper. \$750,000. (B)

St. Louis—Beckhold Co., 1610 Macklind Ave., Andrew L. Wunsch, Pres., bookbinding, mfg. plant, warehouse, offices. Oper. est. to begin Feb., 1959. 60,000 sq. ft. (C)

St. Louis—Narco Drug Co., Inc., office and warehouse. Under const. 30,000 sq. ft.

St. Louis—Nooter Corp., office. In oper. \$500,000.

St. Louis—Pet Milk Co. Moving hdqrs. to consolidate operations.

Springfield—Carnahan Fence Co., 2155 S. Campbell, Garnett Carnahan, Pres., metal processing plant, warehouse. In oper. (B)

Valley Park—Chrysler Corp., Plymouth assembly plant. Oper. est. to begin mid-1959. \$Multi-million. (E)

MONTANA

Anaconda—Anaconda Co., pilot plant to process domestic clays into alumina. Oper. est. Fall, 1958. \$1 million.

Billings—Carter Oil Co., R. W. Gemmer, Off., hydrofluoric acid alkylation unit. Oper. est. to begin 1959. \$1 million.

Butte—Montana Power Co., J. E. Corette, Pres., Cochrane Dam hydroelectric project. In oper. \$10 million.

Sidney—Montana-Dakota Utilities, steam generating plant using lignite coal. Oper. est. to begin Fall, 1958. \$10 million.

NEBRASKA

Columbus—Behlen Mfg. Co., Plant No. 2, metal bldgs., other metal products. In oper. (D)

Columbus—Dale Products, Inc., George Risk, Pres., electronic and electrical components, electromechanical assemblies. Moving part of operation from Albuquerque.

NEVADA

Lovelock—Eagle-Picher Co., Glen J. Christner, Vice Pres., diatomaceous earth processing. In oper. \$2.5 million.

Mill City—Nevada Cement Corp., N. G. Baxter, Off., cement. In oper. \$3 billion. (B)

NEW HAMPSHIRE

Dover—Tiara Footwear, Inc., Main St., David Breitman, Mgr., shoes. In oper. (C)

NEW JERSEY

Burlington County—Shell Chemical Corp., Taylor Lane, has purchased 180 acres along Delaware River for resins and plastics plant. Home office: New York.

Cinnaminson—Meredith Paving Co., Union Landing Rd., concrete mixing plant planned. (C)

Delanco—Wood Conversion Plant. Oper. began Sept., 1958.

Delran Twpsh.—Gladly Plant, River Rd. Oper. began Sept., 1958.

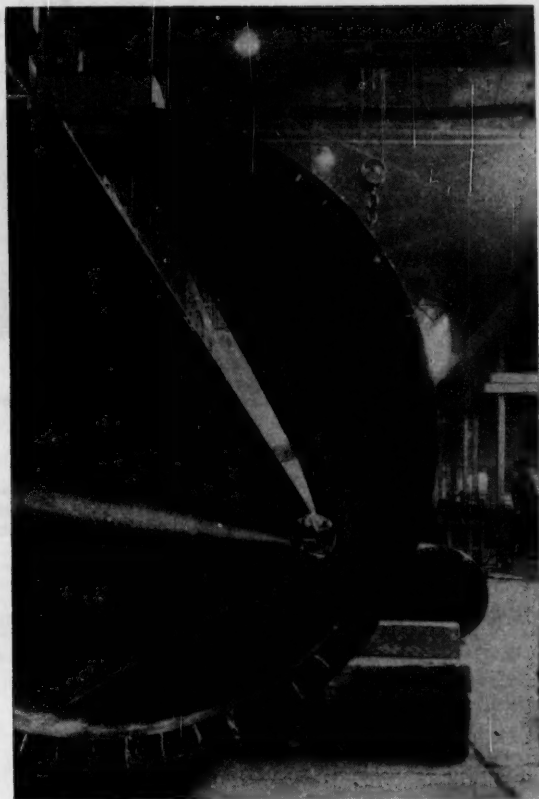
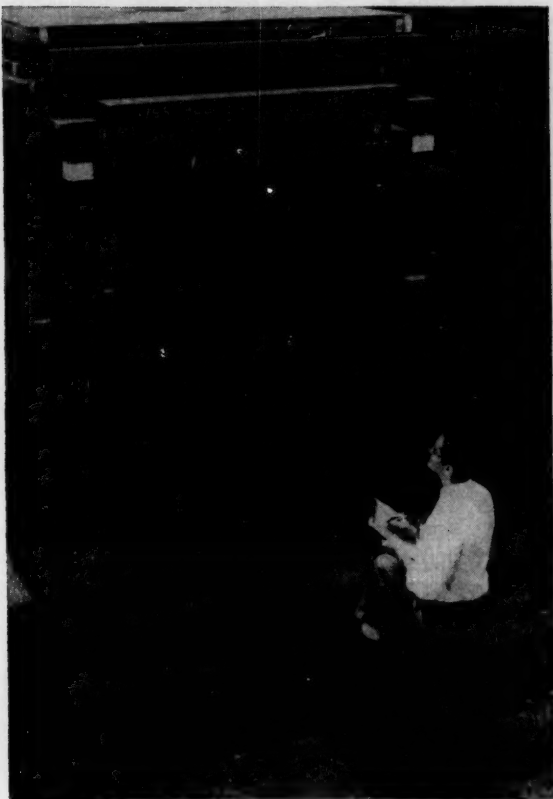
Dayton—International Business Machines, Culvert Rd., Edward L. McCall, Mgr., IBM punch cards, mfg., handling, storing. In oper. 125,000 sq. ft. \$2 million. (C)

Elizabeth—Process Engineering & Machine Co., York St. and Dowd Ave., Stanley Yokell, Vice Pres.; fabrication of process equip., new shops and office. Oper. began Sept., 1958.

Florence—Phoenix Iron and Steel Co. has purchased 900 acres for future plant.

Fredon Twpsh.—Schneider & Marquard, Rte. 94 and Springdale Rd., Oscar Marquard, Off.; precision dies. Moved from Brooklyn. In oper. 14,000 sq. ft. (B)

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a partial list of GOLD MINE purchasers:

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INDUSTRIAL SOUND FILMS, INC.

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NEW PLANTS

Ironia—Bel-Ray Co., Righter Rd., William Kiefer, Pres.; lubricating oil blending. Const. est. to begin Fall, 1958.

Moorestown—Earle S. Bowers Co., N. Church St. and New Albany Rd., Raymond E. Mumma, Mgr., candy and nuts. Div. of Chas. J. Webb Sons Co., Inc., Philadelphia. Oper. est. to begin Jan., 1959. 31,000 sq. ft. \$300,000 plus.

Moorestown—Delta Star Div., H. K. Porter Co., New Albany Rd., electrical equip. and parts plant planned. \$500,000 plus. (D)

Moorestown—Campbell Soup Co., new plant and lab. In oper.

Pennsauken—Schaevitz Engineering, Rte. 130 and Schaevitz Blvd., Herman Schaevitz, Pres.; electronic indicating, measuring and recording equip. Moved from Camden. In oper. 550,000 sq. ft.

NEW MEXICO

Alamogordo—Turner Cline Co., lawn mower sharpening equip. Oper. began Sept., 1958.

Taos County—United Perlite Corp., Patrick J. Hurley, Off., perlite mill. Subs. of United Western Minerals Co. Oper. est. to begin Oct., 1958. \$300,000.

NEW YORK

Astoria (L. I.)—Preferred Oil Co., ocean terminal. Oper. est. to begin Fall, 1959.

Cheektowaga—Empire Smokes, Inc., 2386 Walden Ave., Fred V. Roland, Vice Pres., vending machines. Subs. of Continental Industries, Inc. Oper. est. to begin Nov., 1958. 22,000 sq. ft. (B)

Hicksville (L. I.)—Instruments For Industry, Inc., 101 New South Rd., research, development and production of electronic instruments. In oper. 38,000 sq. ft.

Long Island City (L. I.)—Carter Milchman & Frank, Inc. In Oper. \$125,000. (B)

New Hyde Park (L. I.)—Castro Convertible Corp., Jericho Turnpike, Bernard Castro, Pres.; convertible furniture, general offices, plant, showrooms. In oper. 250,000 sq. ft. \$2 million.

Olean—Tilo Roofing Co., Inc., E. Pine St., Harry Mickelsen, Mgr., roofing and siding. Oper. began Sept. 1958. (B)

Phillipstown—Waverly Chemical Co., surface active agents. Oper. est. to begin Spring, 1959. \$400,000.

Plainview (L. I.)—Mergenthaler Linotype Co., linotype typesetting machines, printing presses. Oper. est. to begin Fall, 1958. 250,000 sq. ft. \$1 million. (E)

Westbury—Theiss-Brand, Inc., 2700 Shames Dr., Westbury Ind. Park, Charles A. Theiss, Pres.; technical services. In oper. (D)

NORTH CAROLINA

Greensboro—H. W. Lay & Co., Inc., Pinecroft Rd. and Patterson Ave., H. W. Lay, Pres.; mfg. and dist. plant for potato chips, other snack foods. Home office: Atlanta. Oper. est. to begin Spring, 1959. 30,000 sq. ft. \$400,000. (B)

Henderson—Dixie Milling Co., Raleigh Rd., Ronald D. Smith, Gen. Mgr., feed and corn processing, grain buying. Aff. of Pillsbury Mills, Inc. Oper. est. to begin Oct., 1958.

High Point—Glen-Alan Furniture Co., Inc. 233 Russell St., Glen Liner, Off.; upholstered living room furniture.

High Point—Morton Mfg. Co., Prospect St., Morton Rabhan, Owner; upholstered living room furniture. 17,000 sq. ft.

Kings Mountain—Waco Sports Wear, Inc., ladies' sweaters. (C)

Lenoir—Kent-Coffey Mfg. Co., furniture (C)

Lenoir—Lenoir Wood Carving Co., carving for furniture plant. (B)

Marion—M. B. M. Hosiery Mills, Inc., men's crew socks. (B)

Shelby—Best Upholstering Co., Inc., N. Morgan St., Herman Best, Pres.; furniture. Oper. est. to begin Nov., 1958. 30,000 sq. ft. \$250,000. (B)

Thomasville—Masonite Fabricators, hardboard, masonite. (B)

Winston-Salem—Salem Co., sports and play clothes plant planned. 31,000 sq. ft. (D)

NORTH DAKOTA

Hebron—Hebron Rafter Co., William Klundt, Off., laminated wood rafters. Owned by Peavey Lumber Co. In oper.

OHIO

Berea—Alloy Engineering Co., 70 Sheldon Rd., contract fabrication of corrosion-resistant high alloy steels. 20,000 sq. ft.

Canton—McKesson & Robbins, Inc., Perry Rd., S. W., H. C. Nolen, Pres., wholesale drug warehouse and distribution center. Oper. est. to begin early 1959. 25,000 sq. ft. (B)

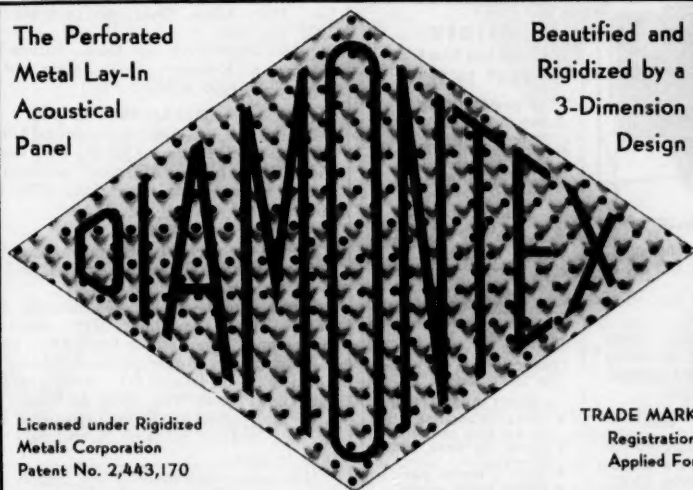
Cleveland—General Electric Co., H. L. Weiss, Mgr., testing fluorescent lamps. Oper. began Sept., 1958. \$750,000.

Cleveland—Sundorph Aeronautical Corp., Eastland and Five Points Rd., Don Patrick, Pres., hangar.

Columbus—Columbus Produce Terminal, Inc., Frank Macaluso, Off., wholesale food terminal. Oper. est. to begin late spring, 1959. \$1 million.

Columbus—Don Huck, 2621 Leeds, warehouse.

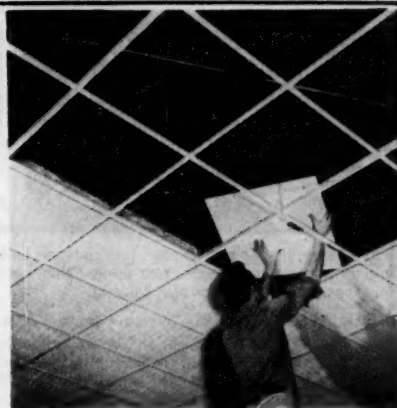
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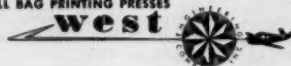
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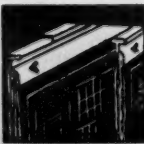
GLIDER "700" BLUE PRINT RACKS 4' high, 2' wide, 2' deep.

The Glider "700" is a modular, strong-steel unit. Designed for planners who have small print filing requirements, it's a space-saver. It retains 700 prints of 18" to 24" widths. Glider "700" provides the same filing efficiency as the Gliders and makes an excellent primary, subsidiary or ready-reference "desk-side" file. The efficient, all-steel Glider line, simple to set up and move, and finished in modern grey enamel, fits the "scheme" of today's offices. Order now through the best office suppliers or write for illustrated literature.



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Plan holders "glide" in on steel tracks, are secured from end-to-end and "glide" out with little effort.



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Glider "700": 4' high, 2' wide, 2' deep.
Glider Cabinet: 52" high, 34" wide, 32" deep.

CONSTRUCTION

All steel

FINISH

Grey enamel

CAPACITY

Gliders: 1800 prints, 24"-48" wide.
Glider "700": 700 prints, 18"-24" in width.
Glider Cabinet: 1,000 prints, up to 30" wide.

5-POINT OPERATION

- "Glide" clamp-type plan holders from channel.
- Loosen the three thumb screws.
- Insert or remove plans.
- Tighten thumb screws.
- "Glide" plan holders into channels.

ECONOMICS OF USE

- No lifting, no folding, no fishing.
- No holes to punch.
- No damaged prints.
- Less expensive than home-made files.

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- Engineers
- Designers
- Decorators
- Contractors
- Home Builders
- Construction Wholesalers
- Artists
- Editors
- Industrial Plants

NEW PLANTS

Columbus—Monarch Finer Foods, Phillipi Rd., Lincoln Village Ind. Park, Earl C. Heitger, Gen. Mgr., wholesale food distribution warehouse. Div. of Consolidated Foods Corp. Oper. est. to begin late, 1958. \$1 million.

Coshocton—Shaw-Barton Co., calendar and specialty advertising, consolidation of operation. Oper. began Sept., 1958. 200,000 sq. ft. \$1 million.

Hillsboro—Pike Natural Gas Co., natural gas plant planned. \$721,500.

Kent—Master Craft Machine Co., Joseph Sally, Owner. Oper. began Sept., 1958.

Lebanon—Texas Eastern Transmission Corp., Millard K. Neptune, Vice Pres., delivery terminal for petroleum products. In oper. \$2 million.

Lima—Ford Motor Co., automobile engines. In oper. 1 million sq. ft.

Mansfield—Mansfield Telephone Co., Raymond Maxwell, Gen. Mgr., underground conduit and cable installation and exchange plant. Oper. est. to begin late, 1958. \$350,000.

Mentor—W. S. Tyler Co., Ned Kuenhold, Vice Pres., wire cloth, vibrating and screening machinery, elevator car doors and enclosures. 60,000 sq. ft.

Niles—Revere Electric Mfg. Co. 7420 Lehigh, mfg. plant and warehouse, lab and research area, engineering and offices. In oper. 110,000 sq. ft.

Northampton Twp.—Alside, Inc., Rte. 8, Jerome J. Kaufman, Pres.; aluminum home construction products, factory and lab. Const. began Sept., 1958. 250,000 sq. ft. \$3 million. (D)

North Canton—Hoover Co., Wither Sr., H. W. Hoover, Jr., Pres., vacuum cleaners, new factory. Oper. est. to begin mid-1959. \$2 million plus.

Piqua—Pioneer Rural Electric Co-Operative, Inc., U. S. Rte. 36, A. E. Halterman, Gen. Mgr., hdqrs. Oper. est. to begin late 1958. \$267,000.

Solon—Bird Electronic Corp., Aurora Rd., Edward E. Edmiston, Sect'y. Oper. est. to begin Fall, 1959. \$150,000. (C)

OKLAHOMA

Oklahoma City—Civil Aeronautics Administration, Aeronautical Center, Will Rogers Field, Fred Lanter, Director; aeronautical center. Oper. est. to begin Jan., 1959. \$2.5 million.

OREGON

Astoria—Oregon Fish Processing Co., Inc., 3rd St., Richard E. DePolo, Pres., liquid fish meal. In oper.

Forest Grove—Pacific Instruments, Inc., Pacific Univ., Tom Holce, Mgr.; electronic microscopes. Oper. est. to begin Oct., 1958.

Hood River—Apple Growers Assn., 11 Third St., John Lamm, Off.; fresh fruit storage. Oper. began Sept., 1958. \$500,000. (A)

Medford—Handicapped Industries, Inc., 827 W. Jackson St., Eric A. Allen, Pres.; toys. In oper.

Milwaukie—Dohrmann Hotel Supply Co., Kellogg Ind. Park, A. C. Dugan, Mgr.; restaurant and hotel supplies. Home office: San Francisco. Oper. est. to begin early 1959. 60,000 sq. ft.

PENNSYLVANIA

Aliquippa—Jones & Laughlin Steel Corp., John E. Timberlake, Vice Pres., continuous annealing line. Oper. est. to begin 1959. \$7.5 million.

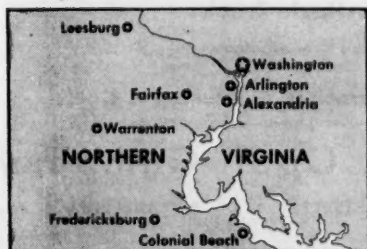
Carnegie—O. Hommel Co., Ernest Hommel, Pres., ceramic research and development center. In oper. 20,000 sq. ft.

Dunmore—Concrete Engineering Co., Au-



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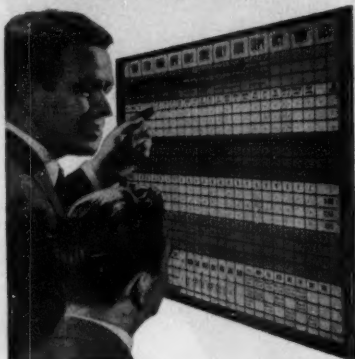
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gust Schwartz, Pres., pre-stressed concrete beams. Oper. began Sept., 1958.

Ft. Washington—American Cyanamid Co., Ft. Washington Ind. Park, T. F. Meagher, Mgr., sales office, warehouse, marketing and distribution center. Oper. est. to begin early 1959. 43,000 sq. ft. (B)

King of Prussia—Squibb & Sons Co., Rte. 23, Jack Kelly, Mgr.; pharmaceuticals warehouse, office. Oper. est. to begin early 1959. 40,000 sq. ft.

Leighton—Leighton Furniture Co. Alfred Barolsky, Pres., furniture. In oper. 42-000 sq. ft. \$175,000. (C)

Luzerne—Germick Bros., Marion St., Dan Germick, Off.; ceramic tile. In oper.

Mahanoy City—Skytop Coal Co., Inc., Vulcan-Frackville Hwy., cleaning plant, coal processing. In oper.

Monessen—Pittsburgh Steel Co., billet mill. Oper. began Sept., 1958. \$6 million.

Muncy—Sylvania Electric Products, Inc., electronic assemblies. Under const. 71,000 sq. ft. (D)

North Wales—Associated Valve and Engineering Co., Marine and Industrial Products Div., 337 W. Walnut St. Jos. Schubert, Pres.; safety valves for air, steam, oil and water lines. Oper. est. to begin Fall, 1958. 30,000 sq. ft.

Penbrook—Capitol Products Corp., A. G. Whyte, Jr., Vice Pres., building products, home improvement specialties, aluminum products, new plant and warehouse. In oper.

Rostraver Twp.—Fox Grocery Co., Rehoboth Valley, French Fox, Pres.; food warehouse. Oper. est. to begin early, 1959. 120,000 sq. ft.

Sellersville—U. S. Gauge Co., Philip Johnston, Vice Pres., gauges. In oper. 188,000 sq. ft. \$2.5 million. (E)

Upper Gwynedd—Edward J. Schoettle Co., Church Rd., Douglas T. Neale, Pres., paper boxes. Const. began Fall, 1958. \$1 million. (B)

York—Redmanson Corp., 630 Loucks Mill Rd., military items and plastics for civilian use. Oper. est. to begin Oct., 1958. 34,000 sq. ft. (D)

Youngwood—Robertshaw-Fulton Controls Co., Penna. Turnpike, T. T. Arden, Pres.; thermostatic control devices for home appliances and industry. Oper. est. to begin early 1960. \$2.5 million. (E)

PUERTO RICO

Aguadilla—Can-Can Inc. de Puerto Rico, Rd. 5, Box 475, Marie Cardis, Off., souvenir dolls. In oper.

Bayamon—American Lead Products Corp., Luchetti Ind. Devpt., Catano-Bayamon Rd., F. J. Bageman, Off.; wheel balance weights. In oper.

Caguas—Comet Industries, plastic forming machine plant planned. Home office: Franklin Park, Ill.

Caguas—Garva Co., 29 Prol. Celis Aguilera St., George Vaida, Off.; vials for carpenters' levels. In oper.

Carolina—Phelps Dodge Copper Products International Corp., P. R., Carolina Ind. Devpt. #6,7,8, Carolina-Loiza Rd., Frank Dratch, Off., copper wire. In oper.

Gurabo—Pan American Metals, Inc., Gurabo Ind. Devpt. #6, John Wallar, Off.; cutlery, holloware. In oper.

Hato Rey—Caribe Laces, Inc., Hato Rey Ind. Devpt. #65, William Crussard, Off.; weaving and dyeing of laces. In oper.

Ponce—Terrazos Nieva, Inc., 63 Hostos Ave., Humberto Nieva, Off.; terrazzo tiles, In

oper.

Rio Piedras—Circuit Components Corp., San Jose Ind. Devpt. #2, Rio Piedras-Caguas Rd., C. M. Schwabe, Off.; telephone-type relays. In oper.

Rio Piedras—Rod Round Factory, 1359 Ponce de Leon Ave., Querubin Parras, Off.; brooms, mops, brush handles, cocktail stirrers. In oper.

San German—Crimptex, Inc., Rd. 2, Box 502, Henry Pellatier, Off.; knitting and weaving yarns. In oper.

Santurce—Jimenez del Valle, Inc., 1114 Ponce de Leon Ave., Felix R. Cancel, Off.; terrazzo tiles. In oper.

RHODE ISLAND

North Smithfield—Industrial Development

Foundation of Greater Woonsocket Ind. Park, building for speculation. Completion est. 1959. 40,000 sq. ft. \$300,000.

SOUTH CAROLINA

Central—Pratt, Read & Co., Peter H. Comstock, Pres., piano parts. Hdqrs: Ivorytown Conn. Oper. est. to begin late, 1958. \$600,000.

Greenville—Maxon Shirt Co., N. Pleasantburg Dr., Max Heller, Pres., boys' sports shirts, consolidation of operation. Oper. est. to begin Oct., 1958. (D)

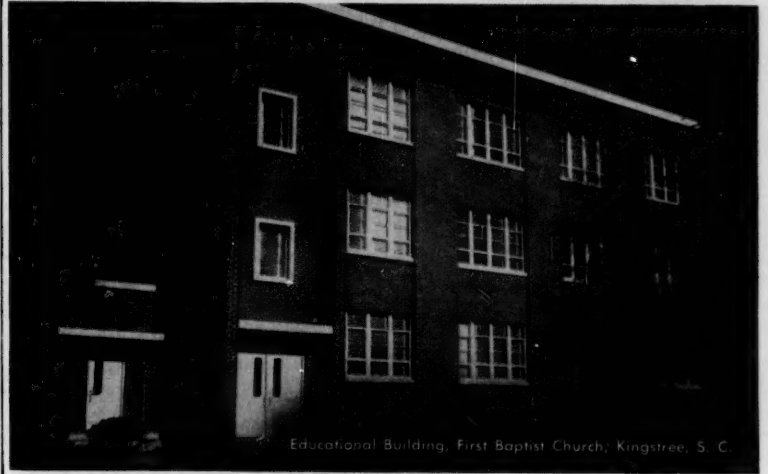
Hartsville—Carolina Power & Light Co., 235,000 kw. generating plant. Oper. est. to begin 1960.

Laurens—Firth Carpet Co., Peter J. Austin, Mgr., tuft woven carpets and rugs. Home office: New York. Oper. est. to begin late,

SOLUTION:

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Educational Building, First Baptist Church, Kingstree, S. C.

Architects: Clark and Poole, A.I.A., Kingstree, S. C.

General Contractors: C. B. Askins & Company, Lake City, S. C.

In the Educational Building of the First Baptist Church, Kingstree, S. C., Solite Lightweight Masonry Units were used to create multi-story, load bearing walls. And their smooth, even texture provided handsome, easily maintained interiors.

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NEW PLANTS

1958. \$Multi-million.

Spartanburg—Faultless Rubber Co., T. W. Miller, Jr., Pres., polyurethane synthetics for furniture, rubber coated textile products. Home office: Ashland. Oper. est. to begin Dec., 1958. 40,000 sq. ft.

Spartanburg—Jonathan Logan, Inc., Hwys. 85 and 26, Irvin Hochburg, Vice Pres.; dresses, distribution center. Oper. est. to begin Jan., 1959. \$1 million. (D)

SOUTH DAKOTA

Watertown—Pepsi-Cola Co. and Seven-Up Co., Fran DeVries, Pepsi Mgr., combined bottling plant. Oper. est. to begin early 1959.

TENNESSEE

Knoxville—Diamond Mill Plywood Co., Paper Mill Rd., Fred W. Wilkerson, Mgr., plywood plant planned.

Knoxville—Volunteer Oil Co., has purchased 3 acre site in Pleasant Ridge Ind. Dist. for bulk storage tanks, warehouse offices, service station. Subs. of Phillips Petroleum Co.

Loudon—American Duralite Corp., Ray Foster, Off., aluminum window units. Oper. est. to begin Nov., 1958.

Memphis—Messel Co., Trigg and Louisiana, Lyman C. Martin, Pres., corrugated boxes. Subs. of Container Corp. of America. Oper. est. to begin Fall, 1958. (C)

Murfreesboro—Murfreesboro Machine & Tool Co., John L. Peterson, Off., tool grinding, special tooling, small parts. In oper.

Nashville—Cincinnati Sheet Metal & Roofing Co., Sidco Ind. Dist. has purchased site for metal warehouse. 52,000 sq. ft.

Nashville—J. Collins Thurman & Associates, 420 Fifth Ave., S., plastic personalized identification tags. In oper.

Nashville—Tra-Pak Corp., 419 McGavock St., toys. In oper.

TEXAS

Baytown—Humble Oil & Refining Co., Morgan J. Davis, Pres., polypropylene plant. Home office: Houston. Const. est. to begin Fall, 1958.

Commerce—Fayette Mfg. Co., Howard Kinman, Mgr., factory. Oper. began Sept., 1958. (B)

Dallas—Callaway Mills Co., 9208 Diplomacy Row, Brook Hollow Ind. Dist., Lewis Pennell, Mgr., carpet distribution center. Home office: LaGrange, Ga. Oper. est. to begin early 1959. 12,000 sq. ft.

Dallas—Packard-Bell, 1303 Dragon, E. R. Westerberg, Mgr.; electronic products for civilian and military uses, factory service branch. In oper.

Henderson—W. M. Products Co., S. A. Watson, Pres., aluminum windows. Moving from Houston. Oper. est. to begin Nov., 1958. (B)

Honey Grove—R. S. Bowlby Tool and Die Co., Commerce St., R. S. Bowlby, Pres.; tooling machinery and equip. Oper. est. to begin Oct., 1958.

Houston—Cooper-Bessemer Corp., T. E. Kraner, Pres., packaged compressor units for gas gathering systems. Home office: Mt. Vernon, O. Const. est. to begin late, 1958. 40,000 sq. ft. (C)

Mercedes—Valley Brewing Co., brewery. Under const.

Mesquite—Earl Mitchell Co., Main St., ladies' dresses. Home office: Dallas. (B)

Odessa—Southwestern Portland Cement,

Herman Liebreich, Dist. Mgr., cement. Home office: El Paso. Oper. est. to begin early 1959.

Sweetwater—Dickerson & Husley Gasoline Co., natural gas processing plant. Home office: Magnolia, Ark. \$1.5 million.

Wylie—Johnston, Inc., Ballard St., children's clothes. Oper. est. to begin Nov., 1958.

UTAH

Garfield—United Heckathorn, fluorine chemicals. In oper.

Salt Lake City—Littion Industries, Vinton Carver, Off., electronics. In oper. (C)

VERMONT

Newport—Newport Plastics Corp., J. T. Audet, Pres., plastic products for airliners. Oper. est. to begin Nov., 1958.

Winooski—American Super-Temperature Wires, Inc., new bldg.

VIRGINIA

Fairfax County—Wm. H. Singleton Co., Inc., fabricated sheet metal. In oper. (B)

Falls Church—Dixie Sheet Metal Co., Inc., fabricated sheet metal. In oper. (B)

Norfolk—Tidewater Oil Co., Freeman Ave., R. E. Benner, Off., has purchased 60 acre site along Elizabeth River for bulk petroleum storage. Hdqrs: New York. \$600,000.

Richmond—Seaboard Air Line Railroad, 3600 W. Broad St., John W. Smith, Pres.; hdqrs. consolidation. In oper. 315,000 sq. ft. \$6 million. (D)

Roanoke River—Appalachian Power Co., Smith Mountain Combination Project, power facilities planned. \$45 million.

WASHINGTON

Anacortes—Port of Anacortes, L. M. Foster, Off., storage warehouse. In oper.

Seattle—Boeing Airplane Co., missile production. \$1.2 million.

WEST VIRGINIA

Carbo—Appalachian Power Co., John Patterson, Mgr., power plant. Oper. est. to begin Nov., 1958. \$60 million. (C)

Fairmont—Monongahela Power Co., Willow Island Station, Don B. Potter, Pres., generating unit. Const. began Oct., 1958. \$Multi-million.

Huntington—ACF Industries, Inc., W. B. Chellis, Mgr., paint shop for railway cars. Under const. \$1 million plus.

Institute—Union Carbide Co., epoxides and other oxygenated chemicals. Oper. est. to begin mid-1959.

WISCONSIN

Clintonville—Railway Equipment Co., 16th St., Charles Freeze, Pres., railroad equip. Oper. est. to begin Nov., 1958. (C)

Watertown—Brandt Automatic Cashier Co., S. Twelfth St., E. W. Quirk, Off.; coin sorting and tabulating devices. Oper. est. to begin late 1958. 71,000 sq. ft.

West Allis—Borden Co., milk, ice cream. Oper. est. to begin 1959. \$3 million.

WYOMING

Cheyenne—Western Steel Co., Lou Kalman, Pres., iron powder plant planned. \$200,000.

Riverton—Pan American Petroleum Corp., natural gas processing plant planned—propane, butane, natural gasoline. Subs. of Indiana. \$Multi-million.

CANADA

MANITOBA

St. Boniface—Dominion Structural Steel Ltd., Messier St., W. A. Marshall, Pres.; steel fabricating plant. Oper. est. to begin Spring, 1959. \$500,000.

St. James—Mid-West Soap & Supplies Ltd., 730 Madison St., M. Berney, Pres.; soaps and detergents. Oper. began Sept. 1958. \$150,000. (B)

Winnipeg—Grandview Industries Ltd., 204 Montcalm St., Jas. Sewell, Mgr.; plastic pipe. In oper.

Winnipeg—Hudson Paper Co. Ltd., F. W. Thornhill, Vice Pres.; paper and paper products, hdqrs. and warehouse. Oper. est. to begin Feb., 1959. \$450,000. (B)

ONTARIO

East York—Moore Woodworking Ltd., Dohm Ave., new bldg. to house roll counter tops mfg. plant. Oper. est. to begin Fall, 1958.

East York—Wham-O Canada Ltd., 8 Bermondsey Rd., Thomas Box, Gen. Mgr.; sporting goods and toys. Aff. of Wham-O Mfg. Co., San Gabriel, Calif. Oper. est. to begin Fall, 1958.

Malton—RCA Victor Co. Ltd., Defense Electronics Systems Div., Derry Rd., research, development and production of defense electronic systems. Oper. est. to begin early 1959. 50,000 sq. ft. bldg. and hangar.

Scarborough—James Howden and Co. of Canada Ltd., 1510 Birchmount Rd., blowers, dust collectors, compressors, air preheaters. In oper. 37,000 sq. ft.

Stratford—Cleaver Brooks Co., J. C. Cleaver, Pres., packaged boilers. Oper. est. to begin early 1959. 25,000 sq. ft. \$900,000.

Toronto—Casco Electric Products (Canada) Ltd., 656 the Queensway, electrical appliances. Subs. of Casco Products Corp., Bridgeport, Conn. In oper.

Toronto—D. B. E. Dairy-Brewery Equipment Co. Ltd., 37 Hanna Ave., W. A. Dickson Mackie, Pres.; stainless steel sanitary valves and fittings. In oper.

Toronto—Herring-Hall-Marvin Safe Co. of Canada Ltd., factory and hdqrs. planned, bank and safe and vault equip.

Toronto—Tasty Chip Steak Products Ltd., W. S. Mulock, Pres., process and package frozen chip steaks. In oper.

Waterloo—Ontario Culvert and Metal Products Ltd., metal culverts, siding, roofing material. 9,000 sq. ft. \$300,000. (A)

QUEBEC

Montreal—J. P. Stevens & Co. (Canada) Ltd., 395 Mayor St. Subs. of J. P. Stevens & Co., New York. In oper.

SASKATCHEWAN

Regina—Central Press Ltd., 1440 Scarth St., Lionel Allen, Mgr., offices and printing plant. (B)

Regina—Donald Rope and Wire Cloth Ltd., 1330 Osler St., wire rope and screen. In oper. 7,500 sq. ft.

Wynyard—Kelliher Creamery, eviscerating plant. In oper. (B)

DIRECTED BY

Richard Edmonds...1882-1930
Frank Gould...1930-1943
William Beury...1943-1955
McKinley Conway...1956

MANUFACTURERS RECORD

(IN REVIEW)



OCTOBER 1884

(AS ABSTRACTED MORE THAN 70 YEARS LATER)

BALTIMORE, MD.

GINNING REVOLUTION

The Montgomery Long Fibre Cotton Gin Company, of Washington, D. C., is the name of a company that promises to work a revolution in cotton ginning. They are the owners of a patent for the treatment of cotton by chemical means, whereby every particle of the cotton, they claim, is separated from the seed, leaving the latter as smooth as if polished. The process is said not to injure in the slightest degree, either the cotton or the seed; and moreover, the cotton is detached in its natural condition, leaving the long, fleecy fibre just as it grows. This, of course, will add to its value, making it more like the long staple cotton. The successful operation of such a method as this would increase enormously the cash value of the crop, in addition to its other numerous manifest advantages. The process can be used with the present style of gin, and the company is arranging to license gins now in operation.

Meanwhile they are themselves perfecting machinery to take the place of the old style of gin. The process has been put into operation at Griffin, Ga., and the company is now putting up machinery there to use it on a larger scale. If the claims of this company regarding this invention are confirmed, when put to the most thorough tests, its importance can hardly be overestimated.

LITERARY NOTICES

A most important book on Cassell & Company's list is "The Story of the Heavens" by Robert Stowell Ball, LL. D., Fellow of the Royal Society of London, etc., etc. The book, although on a scientific subject, is written in a popular manner, and is profusely illustrated with plain and colored plates of exceptional quality. The powerful apparatus of the last decade makes it possible to take photographs of the moon and stars that are simply marvelous in the vividness of their reproduction.

SUCCESSFUL ADVERTISING

The Egan Company, of Cincinnati, manufacturers of wood working machinery, in writing to us, state that their factory has been running on full time and full force all the year, and they add: "We attribute our success in this line to our judicious system of advertising."

GOULD INTERVIEWED

Mr. Jay Gould made some very sensible remarks in St. Louis the other day, when in an interview he deprecated labor strikes on railroads, and did not believe there would ever be any if both sides could fully realize the intimate relations they hold to each other.

He expressed a strong desire that the employees on his road should purchase homes for themselves along the line, and would be very glad to know that every employee of the Missouri Pacific was the owner of some stock of the company. This would give them all a personal interest in the property, and every man would do his best to increase its

earning power. There would be no labor problem to solve.

Mr. Gould expressed decided opposition to a confederation of railroads, and said the proposition was absurd. What we want in this country, he said, is just what we have got—sharp competition, but the competition should be confined to soliciting business on an agreed basis of traffic tariffs. He was also opposed to national legislation for railroads, believing that the Government would utterly fail if it undertook to do what competition and common business sense alone can accomplish.

GENERAL ASSEMBLY PASSES

Some of the Georgia papers are pretty rough on the late General Assembly. One of them has the following notice:

"Died, of old age and general debility, the Georgia General Assembly of 1884-85."

IMPROVED SHOP TOOLS

Quite a number of machine shop owners, while ostensibly recognizing the value of solid improvements being made in shop tools, do not become impressed with their real merits as aids to competition until they find themselves outdone by rivals in business. The discovery, when made in this way, is anything but pleasing, but it is likely to lead, however late, to a searching investigation into recent developments in tools and processes for doing work.

It takes but a very few years for the unprogressive shop owner to get so far behind in facilities for turning out work rapidly and

accurately, that he finds it next to impossible to catch up.

Within a few months, comparatively speaking, marked improvements have been made, among other things, in gear-cutting machines, drilling machines, shaping machines, power hammers, brass working lathes, bolt cutters, emery grinding machines, punching and shearing machines, special milling machinery, screw-cutting machines, and a variety of small shop tools. The improvements are in the direction of enabling good work to be turned out at lower cost. We do not assume that every claimed improvement is a real one. Users of machinery who keep informed of noteworthy changes can weigh the possible advantages of whatever new devices are offered.

Since the general machine business has been dull and the competition sharp, much study has been expended upon improvements, and whether the user of machinery is ready at once to adopt some of them, or, by logic of circumstances, must defer it for a season, he cannot afford to pass them by without close examination, with a view to action, sooner or later.

CONGRATULATIONS

The Daily Telegraph, of New York, was just one week old last Tuesday, and yet it has already scored a decided success. It is a bright, clean 8-page paper, independent in politics, but thoroughly in earnest in its devotion to the protection of American industries. May its prosperity be as great as its merits is the wish of the MANUFACTURERS' RECORD.

Webster's Unabridged Dictionary

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John Miller Hoerle, vice president-assistant to the president (Capital Improvements), of Campbell Soup Company, points on the map to the company's latest Canadian plant now under construction. With him is J. R. Hochreiner, director of industrial engineering.

CAMPBELL SOUP COMPANY

GEARED TO GROW WITH NATION'S APPETITE

By J. M. Hoerle

BEFORE we examine the pattern for progress that lies behind the growth and the future development of Campbell Soup Company let us look briefly at the giant industry within which the company operates.

A major revolution has been transforming the food industry in the United States and, indeed, the world, during the last quarter-century. Technical and scientific progress has brought tremendous improvements and challenges to this vast industry which employs about 17 per cent of the nation's labor force and accounts for nearly 13 per cent of total capital expenditures.

Within this dynamic industry are such surprising statistics as these: food processing plants have more electric motors than any other group of plants in the world; they use more than half the industrial refrigeration in the United States; they handle more product units than any other group; they pump, pipe, heat, cool and purify 500 billion gallons of water a year.

While these figures indicate the size

of the business they should not be permitted to overshadow the growth characteristics that have been identified with the leading food processors. New products, new convenience and new uses for old products have transformed manufacturing, packaging and marketing techniques. Built-in convenience, the big factor in foods today will continue to dominate the industry in the future.

Added to these are the constantly rising population and an increasing per capita consumption of many food products. All promise continued growth for the industry and for those companies within the industry which can meet the challenge of the years ahead.

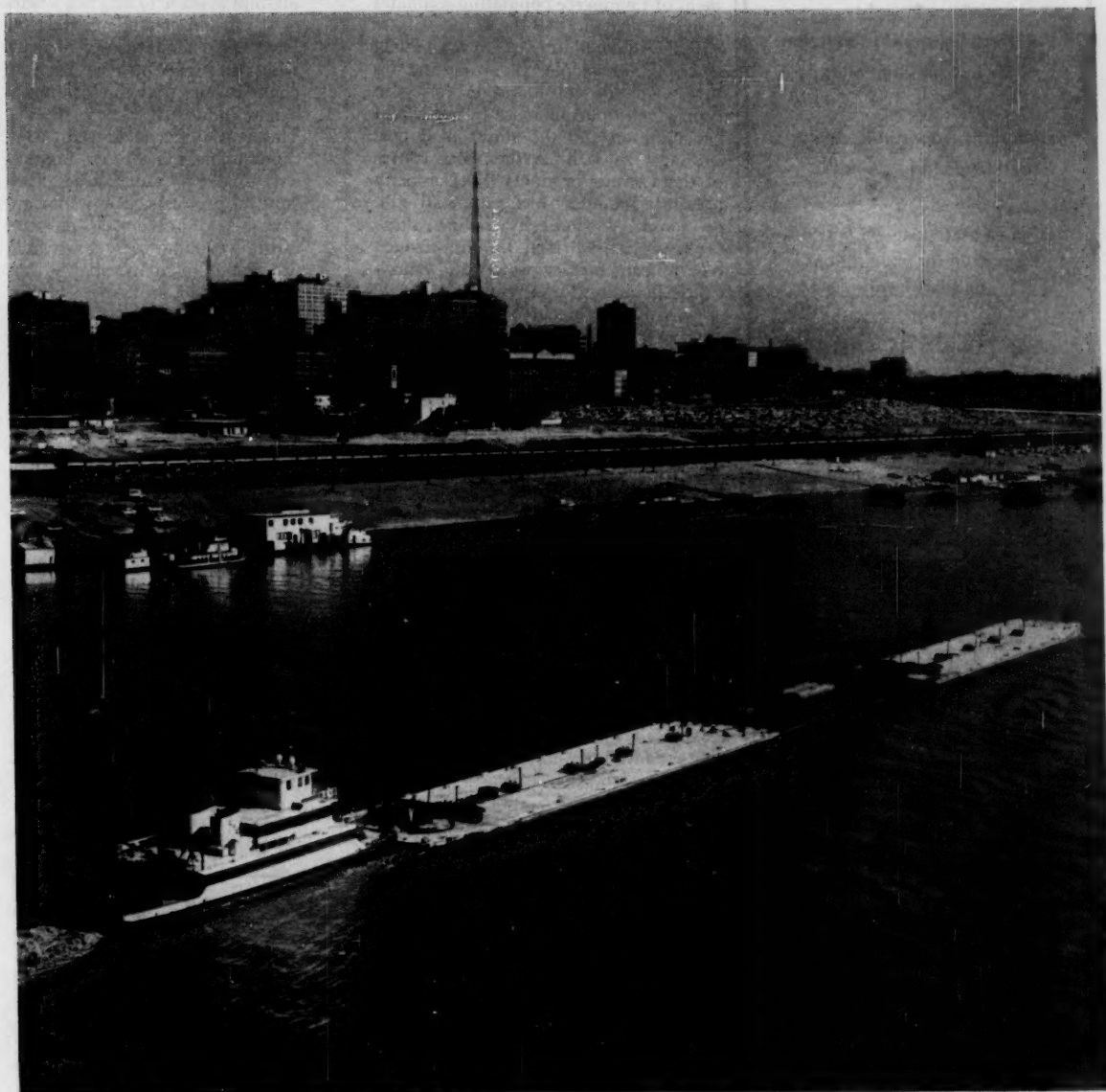
Campbell's history has been one of constant growth from its modest beginning in Camden, New Jersey, in 1869 when offices and plant were located in one small building. Today Campbell's principal manufacturing plants in the United States are located in Camden, New Jersey; Chicago, Illinois; Fayetteville, Arkansas; Modesto, California; Napoleon, Ohio; Omaha, Nebraska;

Sacramento, California; Salisbury, Maryland and Worthington, Minnesota. Smaller operations in the United States are located in Cairo, Georgia; Cinnaminson, New Jersey; Davis, California; Fremont, Nebraska; Gazos Creek, California; Prince Crossing, Illinois; Saratoga, Indiana and Tecumseh, Nebraska. Capital assets of more than 100 million dollars have been added to Campbell's facilities since World War II.

This growth and expansion has not been by chance or circumstance. It is rather the result of careful planning and research plus a wholesome confidence in the future. Planning at Campbell is serious business and is recognized as a continuous function of management. It necessarily involves the coordinated efforts of those engaged in product and agricultural research and development, marketing, quality control, procurement, production and advanced engineering.

Campbell Soup Company's current production reflects the demand for its

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For detailed analysis or services contact Harry Hiett, Exec. V-P., Florence Chamber of Commerce, Box 948, Phone MOhawk 22483, Florence, South Carolina. Strictest confidence observed.

FOOD INDUSTRY

products of a United States population of approximately 170,000,000 people. In planning for Campbell's growth over the next 25 years, the Company has estimated the demand for its products at progressive intervals.

Projections of United States Department of Commerce population estimates indicate that in 1980 the United States will have a population of approximately 242,000,000 people. In estimating future demand, consideration has also been given to an increase in per capita consumption and the addition of new products as well as the sales trends of the various products the Company presently manufactures. Campbell will, of course, periodically review these estimates. If its present thinking is correct it means further growth and Campbell is planning to be ready.

Once having decided that new production facilities will be needed at some time in the future, the problem then is where such facilities should be located. At the outset the planning is aided tremendously by the agricultural research that is being constantly carried on by the company in many areas of the United States in order to determine whether the many ingredients that go into its products can be grown in such areas.

Campbell is also aware of the fact that shifts in the concentration of population occur and has noticed that the center of population has moved steadily westward across entire states from the eastern seaboard all the way to Illinois. These shifts are important to Campbell because they dictate to a large extent where additional production facilities will be needed.

After a particular section of the country has been selected for additional production, an exacting study is then made of the communities in the area to determine the one most suitable. In this connection, two basic general policies are followed: first, the plant size is limited to a total employment of approximately 2,000 people; and secondly, since Campbell is basically a processor of agricultural products, expansion in rural areas rather than urban areas is preferred. It does, however, prefer to locate within a reasonable distance of metropolitan areas to minimize freight on shipments of its finished products.

Many factors are considered in locating a new plant in a particular area. Among the more important are the following:

- (1) **Business Climate of Community—**
A company must be certain that

the majority of citizens in the community understand what the location of new industry will mean to it. This can best be checked by learning of the experience of other companies which have built plants in the area. An attempt is made to find out whether the promises made to industry have been honored and to learn what the reaction has been to changes caused by the location of a new industry.

- (2) **The Availability of Ingredients—**
Since a good many of the ingredients used by Campbell are agricultural products, it is important that plants be located in good farming communities. A new food processing plant probably has greater impact on the agricultural economy in the area than the additional employment has on the development of the town itself.
- (3) **Availability of Good Labor—**
A good supply of labor is, of course, essential. It is not necessary that this labor be highly skilled, as many workers may be trained from surplus farm workers. A small number of skilled mechanics is required.
- (4) **Water Supply—**
This is without doubt an important factor in the location of any food processing plant. The quantity of water used by food processors for washing is large and the supply must conform to rigid quality specifications. In addition, the water supply must be obtained from a source of supply free from pollution or adequately purified by natural agencies or adequately protected by artificial treatment. The water supply system in all its

John Miller Hoerle, who outlines here in this exclusive story the plan for Campbell Soup Company's continued rapid expansion, was born in Brooklyn, New York, in July, 1899. He is a graduate of Cornell University, having received a degree in mechanical engineering, specializing in industrial engineering. He joined Campbell in December, 1934, as assistant production manager and was made production manager in June, 1945. He became vice president in charge of production in July, 1946, and assumed in June, 1953, his present position as vice president-assistant to president (Capital Improvements). Before joining Campbell, Mr. Hoerle was chief engineer with the Charles Bedaux Company, and prior to that time he was associated with the Worthington Pump & Machinery Corporation.

parts must be free from sanitary defects and must be maintained at all times in a proper sanitary condition. The water must be of reasonable temperature and non-corrosive.

- (5) Effluent—The disposal of large quantities of waste water from washing vegetables and process cooling may become a problem and frequently requires treatment in the community in which plants are located. The existing facilities for taking care of this problem must be studied and a determination made to see if an investment in equipment for handling waste is necessary.
- (6) Freight Costs—The cost of outbound and inbound freight must be carefully analyzed in order to keep this item of expense under control. An attempt is made to get a location served by at least two railroads which have provisions for reciprocal switching. It is also considered desirable to have the plant located near a major truck highway.
- (7) Tax Structure—An investigation is made of the State and local taxes and a comparison made with the present locations in which Campbell operates. An analysis is made of the debt structure of the community. Campbell expects to carry its full share and no special arrangements are solicited which might prove burdensome to the community at some future date.
- (8) Cost of Utilities—A comparative analysis is made of the steam and power costs in the community.
- (9) Available Plant Site—The proposed plant site is studied to determine the cost of services; any special grading that might be required; whether there is satisfactory drainage; and whether the soil conditions are such as to require special foundation costs. The site is also examined to see if it is suitable for both future expansion of the plant and eventual growth of the community.
- (10) Type of Community—The educational, social, religious, cultural, banking and recreational facilities of the community are studied to determine whether it will prove satisfactory to the executives and others who will man the plant. The location of a new Campbell plant carries with it a deep sense

of civic responsibility and the company expects to become a real and vital part of the community. The community must offer an environment where employees and their families can lead active, purposeful lives and where employees accept civic responsibilities with a sense of pride.

As planning for progress continues here in the United States, Campbell has not neglected foreign markets. There is a major plant in Toronto, Ontario and another is under construction in Portage la Prairie, Manitoba. A smaller

plant is located in Chatham, Ontario. Overseas, a new plant is taking shape near King's Lynn in England. Agricultural research is going on in a number of places in Europe where the company hopes to develop sources for ingredients.

These ingredients, however, must equal their United States and Canadian cousins in flavor, nutritive value, color and many other qualities because no matter where the company plans to build a plant, it never loses sight of its motto, "To Make The Best, Begin With The Best."

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The City and the Chamber of Commerce of Greater Philadelphia have formed the Philadelphia Industrial Development Corporation—an independent, non-profit agency to promote industrial growth. One of its major assets is a unique "land bank" financed initially by the sale of city-owned land . . . proceeds will be deposited in a revolving fund to acquire additional existing or potential plant sites and to assure a continual land supply. As a non-profit corporation, the P.I.D.C. will be eligible to arrange 100% financing for new plants under the Pennsylvania Industrial Development Authority Act.

Heading the corporation's board of directors are President William F. Kelly, president of The First Pennsylvania Banking and Trust Co.; Executive Vice President Richard Graves, industrial development authority and full-time director of the agency; Vice President Fredric R. Mann, City representative and director of commerce, and Secretary-Treasurer Herbert Adam, senior vice president of Penn Mutual Life Insurance Co. The P.I.D.C. has opened offices in Room 1212, P.S.F.S. Building, Philadelphia.

Additionally, Philadelphia's Department of Commerce, Industrial Development Division, has compiled detailed information on 100 tracts containing 2,263 acres of development, including land at both airports . . . on some 5,000,000 square feet of floor space available in existing buildings for lease or purchase . . . and on the State's new, favorable tax structure for industry.

The needs of hundreds of industries have been surveyed and their present and future requirements for growth are being analyzed by nationally recognized consultants, under contract to the Department of Commerce. The analysis will provide the corporation and the City with specifications for determining policies and tailoring plant sites to fit industrial expansion.

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ALL INQUIRIES WILL BE HELD IN STRICT CONFIDENCE

With the explosive growth of the nation's population and general economy, private property today is being taken over for various uses, dedicated to the public interest, at an unprecedented rate. Discussed here by an executive with 30 years of experience in the appraisal field are some of the problems a plant owner faces in condemnation proceedings. . .

by
W. H. Crouch, Vice President
The American Appraisal Company



WHAT TO DO WHEN YOUR PROPERTY IS CONDEMED

THERE was probably no prior period in the history of our country when so much private property was being taken, or on the verge of being taken, for public use as is the case today.

We are engaged in a vast rebuilding or rehabilitation program which involves the acquisition of farm lands, private homes, and business and industrial properties for the building or widening of interstate and intrastate highways, the construction of expressways through or around cities, and for slum clearance and urban renewal programs.

How will this affect the manufacturer, the business man, the farmer, and the home-owner whose property lies in the path of progress? Some may welcome the opportunity to rid themselves of properties for which they have little use or which yields them a scant return, but others—probably a large majority—will be disconcerted at the prospect of being uprooted from established locations.

These individuals are becoming acquainted with such legalistic terms as "condemnation," "right of eminent domain," "just compensation," "compensable damages," and others which

are often confusing.

When an industrial property is to be taken either in whole or in part, management is confronted with a great many problems. It may be forced to seek a new location and build a new plant to house its operations. This raises the questions: Will the governmental agency buy my machinery? Will they pay my moving costs? Will I be compensated for the loss of business which I may suffer or for the inconvenience I am caused? Can I expect to receive enough compensation to enable me to buy or build a new plant? Where only a part of the property is taken, will I be reimbursed for consequential damages to the remainder?

The answers to these questions and others having to do with compensable and non-compensable damages will depend upon the statutory laws and court decisions in the various states. They include questions which require legal advice and some may have to be decided by the courts.

One question which looms large in the minds of owners whose property is to be acquired for public use is "What assurance do I have that I will receive fair treatment from the governmental

agencies who are charged with the responsibility of acquiring it? There are numerous assurances that the property owner will be treated fairly.

The fifth Amendment to the Federal Constitution provides that no person shall "be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation," and the Fourteenth Amendment specifically prohibits any State from making or enforcing laws which deny citizens those rights. This is the basic law, and if a property owner feels that he has been treated unfairly or has not been awarded just compensation he can appeal to the courts for redress.

Moreover, the Bureau of Public Roads and the State Highway Commissions have outlined procedures calculated to assure the property owner fair treatment. The method generally followed is to attempt to acquire the property through direct negotiation with the property owner rather than through the initiation of formal condemnation proceedings which usually involve delay and substantial expense.

Accordingly, the property owner is given notice of the intention to acquire

CONDEMNATION

his property, following which appraisers are assigned the task of determining the fair market value in accordance with procedures which have been carefully outlined. The appraisers must meet the qualifications stipulated and their reports are subject to review and approval by the Highway Department and by the Bureau of Public Roads. Under the established rules, the appraiser may not act as the negotiator for the purchase of the property.

Another group of individuals engaged by the Highway Commission carries on the negotiations with the property owner. If the owner discovers that some important item as a fence or a well has been overlooked by the appraiser he may call this to the attention of the negotiator, and an adjustment may be made.

Full Protection

If he feels that the appraisal is unfair, he may refuse the offer, and the matter is then taken to court and an award is made by the court based on the evidence and arguments submitted. The procedure is designed to protect fully the property owner's rights. After you learn that your property is to be taken for public use and as you proceed with negotiations, you will discover that certain kinds of damages are not compensable. The emphasis is on the value of the property taken, and you may find that you will not receive damages for such items as moving costs, loss of business during construction, or inconvenience suffered, to mention but a few which may be on the proscribed list in your state.

In the simple case where a complete property is taken, the award will cover the value of the property taken, but the governmental agency is not required to take property which is not affixed to the land and which may be readily moved such as stock inventory, livestock, automobiles, or office furniture.

Permanent improvements attached to the land such as buildings, fences, walks, water and sewerage lines will be taken. However, as we attempt to draw a fine line between realty and movable items, we encounter a border area where legal advice is needed and ultimately a court decision may be required.

Court rulings in different states are not always consistent. Manufacturing piping, electric wiring, or travelling cranes might well be construed as an



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Company**

CONDEMNATION

integral part of the realty and thus included in the taking. But what about light machinery fastened to the floor with a few bolts which could readily be removed? In at least one case, these machines were considered as a part of the realty.

In those cases where only a part of the property is taken the measure of damages becomes more complex, because it involves not merely the value of the portion taken but oftentimes a substantial loss in value to the property remaining which will usually be recog-

nized by the courts where it can be clearly demonstrated.

The generally recognized approach for determining the damages in the case of partial takings is to determine the value of the property before and after the taking. In some states, *immediately* before and *immediately* after is stipulated. However, in many instances the value of the property taken is determined to which is added an allowance for damages to the property remaining which may include such factors as severance damages, denial of access, and

others.

Many courts have held that "market value" or "fair market value" of the property taken is the measure of "just compensation." The terms "market value" and "fair market value" have been defined in varying phraseology by the courts of the various states, so that it would be impossible to establish a standard definition which would be acceptable in all jurisdictions.

Many courts have adopted the "willing-buyer, willing seller" concept which might be simply stated as the price at which a property would change hands between a willing buyer and a willing seller both having reasonable knowledge of the facts and neither acting under compulsion. This concept of fair market value presupposes an open market and a willing buyer and a willing seller.

Just Compensation

Some other authorities maintain that the measure of just compensation is the higher of two figures:

- A. The market value of the property, or
- B. The value of the property to the owner.

In the case of the Onondaga County Water Authority *v.* New York Water Service Co., et al., 139NYS2d755, the appellate division of the New York Supreme Court citing a number of earlier decisions stated that "regardless of the principle of valuation adopted, all cases agree that 'the question of just compensation is not determined by the value to the Government which takes, but the value to the individual from whom the property is taken.'" (Italics ours)

The appraisers recognize three conventional approaches to Fair Market Value, as follows:

1. The comparative approach based on sales and asking prices for comparable properties.
2. The earnings approach based on a capitalization of anticipated earnings.
3. The summation approach based on fair market value of the land plus cost of reproduction of the improvements less depreciation however caused.

The three approaches should be used whenever it is possible to do so. All three approaches are usually appropriate in the case of investment properties such as multi-family residential properties, apartment houses, office



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buildings and mercantile buildings where comparable sales are obtainable and where the earnings history of the property over a period of years may be available for analysis and projection into the future.

However, in the case of specialized industrial properties, there may be no sales of comparable properties detached from a going business and representing a voluntary arms-length transaction. The sale of a profitable business enterprise involves consideration of so many other factors that it cannot be considered as representing the value of the industrial property without the attached business.

On the other hand, the sale of a property under distressed conditions or forced liquidation will not truly reflect fair market value. Nevertheless, if such sales have occurred, the appraiser should investigate them and accord them whatever weight he feels is justified.

The earnings approach to the value of industrial properties is usually not very helpful. Industrial earnings are often the result of sound management, and acceptable product or line of products resulting from research, and other intangible factors such as patent rights, established sales outlets, and many others. The demonstrated earning capacity cannot therefore be attributed solely, or even chiefly, to the physical plant.

There are other situations where a plant is reasonably modern and well-maintained, but because of poor management or a change in buyers' demands, or for other reasons unrelated to the property itself, the earnings are small or non-existent.

The plant real estate might command a substantial rent if leased to others and the conversion of this rental income expectancy to capital value might be considered as an approach to market value provided the rental estimate fully reflects the highest and best use of the property.

Value Established

Although sales of comparable properties and the history of earnings should not be ignored, they are usually inclusive in establishing the value of an industrial property, and the principal reliance must be placed on the summation approach including particular consideration of condition, deferred maintenance, and obsolescence.

The management of an industrial concern whose property is about to be taken needs competent legal counsel to steer them through the maze of problems which are bound to arise and to advise them as to what damages are compensable and what are not compensable under the laws of the state in which the property is located, so that they will know what specific claims to press in the course of the negotiations.

The management will also want to assure themselves that the appraisal has been made by appraisers who are thor-

oughly competent and experienced in appraising industrial properties. Management may wish to retain independent appraisers to check the values submitted by the state or other condemning authority.

Having assured himself that the offer to purchase is fair and reasonable, the property owner may be well advised to accept it and thus save himself the expense and uncertainty of litigation. If he is thoroughly convinced that the offer is inadequate, it is his right to reject it and prepare for trial.



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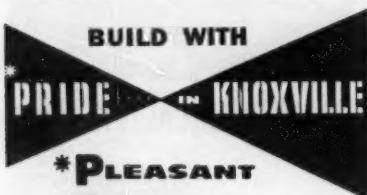
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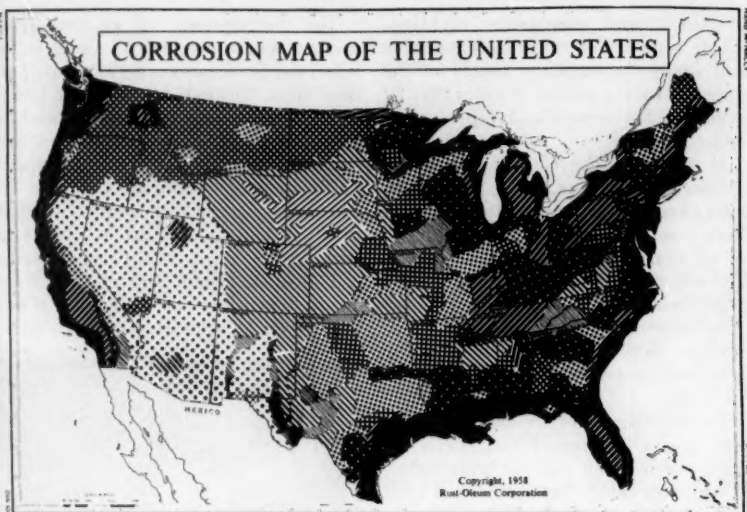
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RUST RATE



Legend

YEARS AND MONTHS	COLOR CODE	YEARS AND MONTHS	COLOR CODE	YEARS AND MONTHS	COLOR CODE
3.00 - 3.11	[Solid Black]	6.00 - 6.11	[Diagonal Lines]	9.00 - 9.11	[Cross-hatch]
4.00 - 4.11	[Horizontal Lines]	7.00 - 7.11	[Vertical Lines]	10.00 - 14.11	[Stippled]
5.00 - 5.11	[Dotted]	8.00 - 8.11	[Diagonal Lines]	15.00 +	[Cross-hatch]

NO RUST FOR THE WARY

New Corrosion Rate Index Compiled For U. S. Cities

CHICAGO. The comparative rates at which rust proceeds in different parts of the country have been exactly established for the first time for all United States cities over 10,000 population.

It takes three years, the fastest rate in the country, for rust to corrode a standard, uncoated steel test panel, the size of an auto license plate, in four different cities—Buffalo and Rochester, New York; Erie, Pennsylvania; and Miami, Florida. Slowest rust rate, more than 15 years, is in Tucson, Arizona; Roswell and Santa Fe, New Mexico. In all the nation's major industrial centers the rust rate is under four years.

This was disclosed in the first Rust Index of the United States, published by the Rust-Oleum Corporation, Evanston, Illinois. The Index, the result of a 25-year research program, lists the 523 cities of the country with a popula-

tion of more than 10,000 and the comparative rust rate for each city. Variations in rate result from the different amounts of rainfall, wind, corrosive gases, sunlight, and salt water present in each locality.

Rapid Rate

The rust rate is three years, one month in Pittsburgh; three years, two months in Los Angeles; three years, three months in Cleveland; three years, five months in Chicago; three years, six months in New York City; three years, eight months in Philadelphia and Detroit; three years, nine months in San Francisco; and three years, 10 months in Boston and St. Louis.

Rust-Oleum Corporation, which produces rust-preventing coatings, estimated that the nation's rust bill is currently about \$7.5 billion per year, an

RUST RATE

increase of \$2 billion over the annual toll 10 years ago.

The index was compiled in a mammoth research program, in which dated and uncoated steel panels were left exposed at industrial sites throughout the country. The panels were of 28 gauge, low carbon, cold-roll sheet steel. Thousands of panels were dated and left exposed by Rust-Oleum representatives during the past quarter of a century. Periodic examination of the panels provided the data for the Rust Index. The criterion for the Index was the time it took for the uncoated steel panel to rust to a severe degree.

Major Areas

Of the 523 cities listed, 221, or 42 per cent, were indexed as Class I, meaning that uncoated test panels there rusted in less than four years. Class I rust cities include every major industrial area and most of the nation's secondary industrial centers. In Class II, where test panels rusted in four to five years, are 95 cities. The 316 cities in Classes I and II comprise 60 per cent of the nation's cities with population over 10,000.

Industrial Area Opened in Monroe

MONROE, LA. The site of a World War II Army airfield has been converted into an industrial area containing 772 acres here.

The property recently was turned over to the City of Monroe, and the municipality is now able to grant leases outright for periods up to 99 years, with no recapture clause.

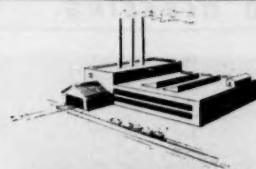
The district already is well developed, with several streets, while water, electricity, sanitary waste disposal lines, and natural gas lines already are installed.

Railroads serving the district are the Missouri Pacific and the Illinois Central. The area also is adjacent to Selman Field, Monroe's airport, and water transportation is available on the Ouchita River.

The City of Monroe is developing the park in conjunction with the Monroe Area Industrial Development Corporation, of which John Sherrouse, Jr., is president. Monroe's current Mayor W. L. Howard was the first president of the development organization.

October, 1958

73



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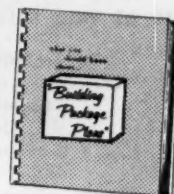
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LAND CLEARING



Helping to keep land costs low in Houston's San Jacinto Industrial District is the fanned-flame technique of clearing, invented by E. N. Sonnier (center). Ducking the fire is Industrial Realtor Leslie L. Appelt (left) who is handling development and land sales for the district. With his back to the flame blower (right) is Robert E. Hornberger, head of the firm which owns the tract on which the industrial district is being created.

Flame Blower Helps Clear Land For Industrial Sites

HOUSTON. Clearing of land in a planned industrial district or just for individual plant sites can be and frequently is a big and expensive problem.

However, a Houston earth-moving and road-building contractor has come up with something new to help cut the task down to size. His technique was developed from an idea that came to him while he was blowing into the coals of his barbecue pit to get the fire started.

The inventor is E. N. Sonnier and his approach was this: He mounted a five-foot electric fan on a truck. Behind this he installed a 50-gallon drum for diesel oil, along with a pump which squirts the oil 30 to 40 feet into trees, trunks and brush which have been piled up.

Waiting a day or so after such a pile is gathered to let the sap drain out of the wood, he touches a match to the pile—which sometimes is as high as a two-story building—then starts his fan and "squirts." Within a few hours the mountain-size stack of brush is gone.

Mr. Sonnier claims that his method reduces the time and expense of land clearing operations by at least a third and sometimes more, depending upon the density of the hard-to-burn green timber.

The Houston contractor has used this method effectively in the land-clearing operations at the San Jacinto Industrial District here. The district, which has basic site sizes ranging from five to 50 acres, is owned by Hornberger Brothers Properties, Inc.

1,100 Acres in District

Altogether, the district contains 1,100 acres of land in an area providing unusual accessibility both by rail and highway. The Southern Pacific Railway has contracted to buy 150 acres of choice sites in the district, which it is holding available to companies seeking sites requiring rail service. With the closing of this transaction, about 30 per cent of the land in the area has been sold.

RECEIPTS

By Suzanne Johnson

Decision-Making—An Annotated Bibliography, by Paul Wasserman with Fred S. Silander. Graduate School of Business & Public Administration, Cornell University, Ithaca, N. Y. \$3.50, 111 pages.

Quasi-Reorganization, by James S. Schindler. This analysis on development of a general quasi-reorganization concept is based on a doctoral dissertation. Bureau of Business Research, School of Business Administration, University of Michigan, Ann Arbor, Mich. \$5. 176 pages.

Bratenahl Village, a Community in Conflict. Problems of redevelopment in a small community. Urban Land Institute, 1200 18th Street, N.W., Washington 6, D. C. \$1. 8 pages.

Chemical and Petroleum Investment Record. Stanford Research Institute, Menlo Park, Cal. \$10. 71 pages.

A Guide for Industrial Development. A compilation of talks made at a recent one-day industrial development conference sponsored by the Chicago and North Western Railway Company. Included are discussions by H. M. Conway, Jr., editor and publisher of *INDUSTRIAL DEVELOPMENT*; John T. McCarty, consultant, public and employee relations services, General Electric Company; Otto W. Pongrace, manager, engineering and construction service department, Ford Motor Company; Ben W. Heineman, chairman, Chicago and North Western Railway; Dr. Donald M. Mayer, department of geography, University of Chicago. Chicago and North Western Railway Company, industrial development department, Chicago. 34 pages.

Construction Volume and Costs, 1915-1956. A statistical supplement to Construction Review. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 55 cents. 94 pages.

The Effects of Large Lot Size on Residential Development. Urban Land Institute, 1200 18th Street, N.W., Washington 6, D. C. \$3. 53 pages.

The Tools for Doing an Effective Industrial Development Job, by Richard L. DeChant, manager, area development department, the Cleveland Electric Illuminating Company. Talk before the American Management Association Seminar on Industrial Development, Colgate University, A.M.A., 15 Broadway, New York. 11 pages, 12 exhibits.

Proceedings of the Governor's Conference on Urban Area Problems. Indiana University, Bloomington, Illinois. 186 pages.

Western Resources Handbook Data Sheets. The twenty-fourth issue. Stanford Research Institute, Menlo Park, California. 34 pages.

Community Industrial Development—A National Survey. Speech by Victor Roterus, Director, Office of Area Development, U. S. Department of Commerce, before Louisiana's Fifth Annual Industrial Development Conference. It contains several comments on methods of supporting industrial development and describes essential requirements for success in community industrial development. U. S. Department of Commerce, Washington, D. C. 10 pages.

The Florida Real Estate Analyzer. Florida Business Letter, 186 Southwest 13th Street, Miami, Florida. 74 pages. \$5.00.

"Florida offers more real estate opportunities than any other state," according to the Florida Real Estate Analyzer, a study just published by the Florida Business Letter and First Research Corporation, of Miami.

The get-rich-quick land speculator will find no secret formulae in the study. However, the investor who is interested in buying good real estate, and waiting patiently for a return on his investment will find the Analyzer a valuable aid. Attention is focused on the long-term investment aspects of Florida real estate.

Statistics are included which show the startling rise in prices of land in various areas of the state since pre-World War II days. On the east coast, for example, waterfront land could be purchased before the war at Miami Beach for as little as \$300 per front foot. By 1957, the price had gone to as much as \$10,000 per front foot. The Florida Keys and the west coast have shown similar meteoric rises. Oceanfront property at Marathon during pre-war days was available as low as \$2 a front foot; land in the same area today is priced up to \$400 per front foot. Sarasota's present waterfront prices range from \$400 to \$2500 the front foot, compared with \$10 to \$40 two decades ago.

Economic Considerations in the Foundation and Repayment of California Water Plan Projects. A study for the State of California by The John Randolph Haynes and Dora Foundation to establish policies and practices which will be proper and equitable, which will apply uniformity to all of its proposed projects, and which will permit and encourage the various local and federal agencies to continue their participation in the development of California's water resources. Stanford Research Institute, Menlo Park, California. 125 pages.

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Here are a few of the services we perform:

- *Analyze topography, soil and water conditions*
- *Report in detail on labor supply and all utilities*
- *Investigate all tax and zoning laws*
- *Check proximity of raw materials required*
- *Report on market accessibility and entire marketing area*
- *Study housing, school and all community facilities*
- *Condition the community for industry acceptance*
- *Furnish complete information on rail, air, highway and water transportation.*



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C&NW Ry., 400 West Madison St.,
Chicago 6, Ill.

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OCTOBER 1958

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I. D. SECRET SITE SERVICE

There may be sound reasons why you should wish to obtain preliminary information on possible sites without revealing your interest or identity. Recognizing this, INDUSTRIAL DEVELOPMENT offers a Secret Site Service to readers who hold positions of responsibility with manufacturers or other business firms having a legitimate interest in sites. This service is offered in cooperation with the development agencies whose advertisements you see in this issue. Here's how the plan works:

1. Complete the questionnaire below. Be specific to avoid wasting your time and that of cooperating research groups. DO NOT PUT YOUR NAME OR ANY IDENTIFYING INFORMATION ON THIS FORM.
2. Transmit this form to ID headquarters, giving your identification on a separate sheet. For convenience, just enclose a business card or letterhead.
3. When we receive your form, we will immediately assign a case number to your form and will refer to it thereafter by number only. Your identification will be placed in a separate confidential file to be used only in communicating with you.

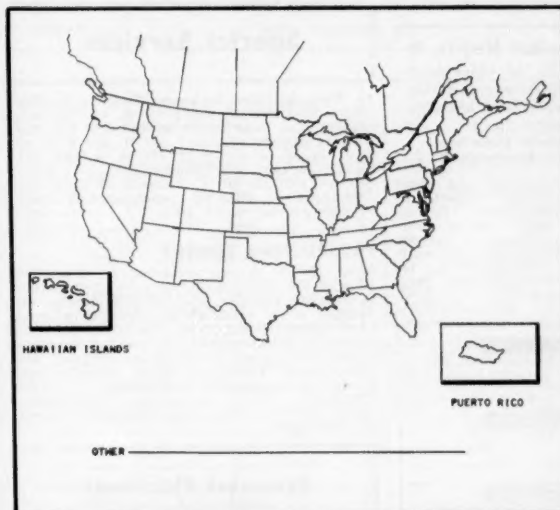
4. We will then send photostatic copies of your inquiry form to development agencies serving the area in which you are interested.

5. Those who have sites meeting your needs will return descriptive material to us, addressing us by case number.

6. We will relay all proposals to you. If any proposal is of interest, you may ask for more detailed data through us or contact the agency direct. There is no cost or obligation—this is purely a service for ID's business readers.

LIST YOUR REQUIREMENTS AS SPECIFICALLY AS POSSIBLE

AREA OF INTEREST—Draw a circle around the approximate area in which you are interested:



TYPE OF SITE DESIRED

- ☐ Rural, adjacent to community with population less than
- ☐ Urban, in planned and restricted industrial district if possible.
- ☐ Water process, on stream with minimum flow of gal./min.
- ☐ Dispersed, well removed from target areas or cities, for defense work.
- ☐ Other

TRANSPORTATION SERVICES

- ☐ Rail siding required. Estimated annual tonnage
- ☐ Trucking service required. ☐ Adjacent to major highway.
- ☐ Airport for ☐ passenger service ☐ freight
- ☐ executive airplanes.
- ☐ Water transport ☐ barge ☐ ocean-going.

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- ☐ Electric power. Ultimate total load kw.
Special demands
- ☐ Water. Required supply gal./min. at psi.
Special demands
- ☐ Natural gas. Demand cu. ft./day.
Special demands
- ☐ Sewage. Special demands

LABOR

- ☐ Union shop. ☐ Non-union shop. ☐ Depending on location.
- Skilled males Semi-skilled males Unskilled males
- Skilled females Semi-skilled females Unskilled females
- Special factors

RAW MATERIALS

List principal items which influence your location economics:

Your approximate capitalization \$
Dun & Bradstreet rating

BUILDING

- ☐ Desire to rent existing building, occupancy in days.
- ☐ Desire to buy existing building, occupancy in days.
- ☐ Want local group to erect building to our specs. and lease to us.
- ☐ Expect local group to provide bldg. below cost or gratis as inducement.
- ☐ Will erect own bldg. but interested in aid in mortgage financing.
- ☐ Will assume complete responsibility for building and financing.

BUILDING SPECIFICATIONS

Floor area sq. ft. Ceiling clearance ft.
Special requirements

Attach your card or letterhead to this form and mail to:

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Conway Publications, North Atlanta 19, Ga.



Industrial Districts

The following planned industrial districts have sites available for immediate construction. Advantages offered by such districts are described in detail in the November-December 1954 issue, pages 6, 7, and 8.

Services offered are indicated by the following code: (A) Architect & Engineer; (C) Construction; (E) Electric Power; (G) Natural Gas; (F) Financing; (P) Paved Streets; (R) Rail Siding; (S) Sewers; (T) Telephone; (W) Water.

Iowa

Iowa "Manufacturing Meadows" — Clinton, Iowa (population 35,000), 138 miles west of Chicago on Mississippi River and Lincoln Highway (U. S. 30), 190 acres within city. Master plan by Skidmore, Owings & Merrill. Served by Chicago and Northwestern Railroad. Developed by Clinton Development Company, a civic-non-profit corporation. CHapel 2-4536, R. J. Stapleton, Managing Director. Services available: (a) (optional), (c), (e), (g), (f) (optional), (p), (r), (t), (w), restrictions.

Georgia

METROPOLITAN ATLANTA — Five Industrial Districts offering planned sites of varying location, size, price. Services available: (A) optional, (C), (E), (G), (F) optional, (P), (R), (S), (T), (W). In your Southeastern plant or warehouse survey contact: F. Wm. Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

Missouri

PAGE INDUSTRIAL CENTER — St. Louis — a planned industrial park, developed by Page Industrial Center, Inc., 7811 Carondelet, St. Louis 5, Mo., Edward L. Bakewell, Realtor, phone CENtral 1-5555, served by Rock Island Railroad, 60 acres with all services available on property. Restrictions.

Available Sites

KIEL, WISCONSIN INDUSTRIAL PARK SITES — Low tax. Cheap Power. Seaway Close to fast-growing midwest markets. Recreation. See us on your vacation trip. Kiel Industrial Development Corp., P. O. Box 7, Kiel, Wis.

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Middlesex County Industrial Department
County Record Bldg., New Brunswick, N. J.

CANADA—80 thriving industries and room for many more. Peterborough Ontario in the heart of the Kawartha Lakes District Zoned industrial sites, good labour relations. Direct routes to Canada's largest consumer markets. Resort living with metropolitan conveniences. CONTACT L. H. ENGHOLM, Industrial Commissioner, City Hall, Peterborough, Ontario.

SALISBURY, N. C.—Freeway sites with all utilities and rail or nearby large tracts on Yadkin River. NEW Fantus engineering study confirms profit and pleasant living in community. NEW airport (4200' x 100') paved; NEW Holiday Inn (const.); NEW "Y"; NEW schools; NEW shopping center; NEW outlook among people. Contact: William F. Pence, Mgr., C of C, ME 3-4221 or Box 539.

SUBURBAN ATLANTA—Sites of 3, 5, 10, 25, 50, 100 or more acres. All utilities and rail service in DeKalb County—Georgia's newest industrial area. 70% urban with more than 200 industries in industrial districts and individual tracts. For your new Southeastern plant or warehouse location—inquire and visit through F. Wm. Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

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INDEX OF ADVERTISERS

Alabama Power Co. 3rd Cover Agency—Tom Little & Associates	Nickel Plate Road 10 Agency—Fuller & Smith & Ross, Inc.
American Creosote Works, Inc. 60 Direct	North Carolina Dept. of Conservation and Development 18, 43, 44, 45, 46, 47, 48 Agency—Ayer & Gillett
Anniston Chamber of Commerce . 73 Agency—Nottingham, Inc.	Orange County Industrial Developers, Inc. 74 Direct
Atlantic Steel Co. 53 Agency—Lowe & Stevens	Oregon Dept. of Planning & Development 70 Agency—Botsford, Constantine & Gardner
Bakersfield Chamber of Commerce 75 Agency—Owen N. Dailey Adv.	Palmer & Baker Engineers, Inc. 79 Direct
Greater Burlington Industrial Corp. 12 Agency—Joseph Smith, Advertising	Parsons, Brinckerhoff, Hall & Macdonald 79 Direct
Calgary Power Ltd. 5 Agency—James Lovick & Co., Ltd.	Philadelphia Department of Commerce 67 Agency—The Beacon Agency, Inc.
Carolina Power & Light Co. 71 Agency—J. T. Howard	Piedmont Airlines 50 Agency—Liller, Neal, Battle & Lindsey
Chicago & North Western Railway 76 Agency—The Caples Co.	J. R. Prevette & Associates 79 Direct
Cleveland Electric Illuminating Co. 4th Cover Agency—McCann-Erickson, Inc.	Problemsolver 79 Direct
DeLeuw Cather & Co. 79 Direct	Proctor—Ingels 79 Direct
Robert G. Danmead 79 Direct	Puget Sound Power & Light Co. 10 Agency—Frederick E. Baker & Associates
Diamond Mfg. Co. 57 Agency—Frederick B. Garrahan	Real Estate Management, Inc. 79 Direct
Feist & Feist 79 Direct	Byron Reed Co., Inc. 79 Direct
First Research Corp. 78 Direct	Reynolds Associates 79 Direct
Florence County Chamber of Commerce 66 Direct	Greater San Antonio Development Committee 2nd Cover Agency—Wyatt Advertising, Inc.
Ford, Bacon & Davis 79 Agency—Victor A. Smith	Sauereisen Cements Co. 58 Agency—The Advertising Co. of William Cohen
General Coal Co. 60 Agency—Aitken-Kynett Co.,	South Carolina National Bank 74 Agency—Bradley, Graham & Hamby
Georgia Power Co. 1 Agency—Lowe & Stevens	Southern Lightweight Aggregate Co. 61 Agency—Cabell Eanes, Inc.
Grand Central Industrial Center ... 2 Direct	Southern Railway System 16 Agency—Cunningham & Walsh
Graphic Systems 60 Agency—Diener & Dorskind, Inc.	Southwestern Electric Service Co. .. 15 Agency—Rominger Advertising
Greer Engineering Associates 66 Direct	Standard & Poor's Corp. 5 Agency—Edwin Bird Wilson, Inc.
Greer-Jewell & Associates 66 Direct	Tennessee Coal & Iron Division of U. S. Steel Corp. 55 Agency—Batten, Barton, Durstine & Osborn
Gustave M. Goldsmith 79 Direct	Texas Power & Light Co. 73 Agency—Don L. Baxter, Inc.
A. Jay Hofmann Co. 79 Direct	Toronto Industrial Leaseholds, Ltd. ... 73 Agency—Muter, Frankfurter, Culliner & Gould
Industrial Sound Films, Inc. 56 Direct	Tracy District Chamber of Commerce 15 Direct
Knoxville Chamber of Commerce .. 72 Agency—Huster Advertising Agency	Union Electric Co. 65 Agency—Gardner Advertising Agency
LaSalle-Peru-Oglesby-Spring Valley Chamber of Commerce 12 Agency—Kenneth S. Butler & Associates	Hyman Viener & Sons 58 Agency—Eastern Associates, Inc.
Lewis Terminals, Inc. 4 Agency—Power Advertising	Virginia Electric & Power Co. 59 Agency—Cargill & Wilson, Inc.
Lockwood Greene Engineers, Inc. .. 79 Direct	Way Realty Co. 79 Direct
Louisiana Dept. of Commerce & Industry 4 Agency—Gordon Advertising Co.	West Engineering Co. 58 Agency—Advertising Associates, Inc.
Mississippi Valley Gas Co. 11 Agency—Godwin Advertising Agency	West Texas Utilities Co. 69 Agency—Curtis Taulbee Advertising
MoMar Industries 58 Agency—Howland Advertising	Windsor Properties, Inc. 5 Agency—Rominger Adv. Agency
Monroe Area Industrial Development Corp. 11 Agency—Shell Advertising	
New Haven Railroad 72 Agency—Cayton, Inc., Advertising	



The Colonel Says

RECOVERY

Whilst being happily conscious of the growing number of indications that business activity is definitely on the uptrend following the recent recession, we happened the other day on a rash of flamboyant verbiage about signs of a recovery in an era past.

The item to which we refer appeared in the December 2, 1920, issue of MANUFACTURERS RECORD. In those comparatively unhurried days, without TV and when radio was heard via ear phones, it seems that an editor could wax extraordinarily eloquent at the drop of any old hat.

The 1920 model editorial began with this quotation from Isaiah: "Watchman, What of the Night? The watchman said, the morning cometh." The rest was as follows:

"The whole country is asking, What of the Night? and rightly so, for the night of business is dark and the clouds lower heavily. Men everywhere are oppressed with the mighty damage the storm has wrought. The lightning still shivers the trees and the thunder rolls. But the watchman sees that the morning cometh. He sees that the clouds are growing thinner, the lightning strikes less fiercely, and faintly he visions a sign that the storm is passing. It has done damage, immense damage; it has swept mighty trees away; it has flooded the lowlands and made some homeless, but it has now done its worst. Its fury is over.

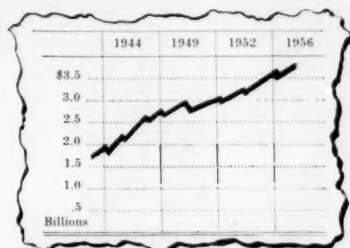
"Soon the sun begins to break through the clouds, man reasserts his dominion and promptly starts afresh on his work. He re-plows, he replants, he builds stronger dams, he moves to higher grounds and goes forward to larger things. He forgets the terror of the storm, his nerves regain their calm, his muscles become firm, his backbone stiffens and he conquers all difficulties.

"That is the story of business. It has faced the storm, it has been beaten down for awhile, but it will soon rise and move upward to higher ground. The clouds are passing, the sun begins to shine, and the watchman sings aloud to the farmer and the merchant, the manufacturer and the day laborer, 'The Morning Cometh.'

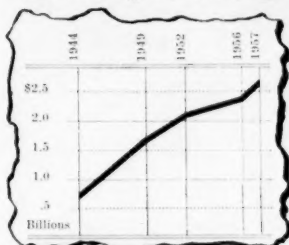
So, even as it happened back in 1920, we can say today we are very pleased that another light of recovery shineth through, and a new surge of good business cometh for those who doeth good jobs!

PROGRESS

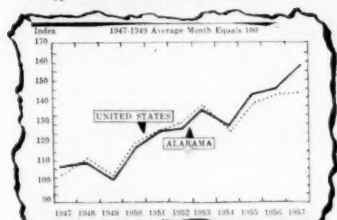
Highway sign in Nebraska: "Main highway open for traffic while detour is being repaired."



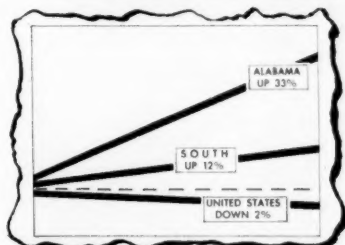
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